NAME INDEX.

ANFILOGOFF, N. L., on the 1944 edition of "Standard Methods," 207, 208, 209

AULD, S. J. M., on the late Christopher Dalley, 90

BEECROFT, G. F., on the 1944 edition of "Standard Methods," 205–206, 207, 208, 209

BLACKMORE, H. A., Calculation of the Volumes contained in the partially filled Dish Ends of Horizontal Cylindrical Tanks, 167–170

BOND, G. W., on Lubricating Oils in Service, 128–130

BOTSET, H. G., and MUSKAT, M., The Study of Reservoir Fluids by Surface Recombination Experiments, 351–369

BROOM, W. E. J., on the 1944 edition of "Standard Methods," 210

BRUCKSHAW, J. McG., Geophysical Methods Applied to Oil Prospecting, 271–310

——, on Geophysical Methods Applied to Oil Prospecting, 311, 312

CANTOR, J., on the 1944 edition of "Standard Methods," 205

DALLEY, C., at Thirtieth Annual General Meeting, 21

DEWHURST, T., on Refining Terminology, 11

DIESEL INDEX PANEL, The Correlation of Cetane Number with other Physical Properties of Diesel Fuels, 193–197

DUNSTAN, A. E., on Refining Terminology, 11

——, on the late Christopher Dalley, 91, 150

——, on the 1944 edition of "Standard Methods," 210

EBY, H. M. *See* STROSS, M. J.

EDITORIAL SUB-COMMITTEE, The 1944 Edition of "Standard Methods for Testing Petroleum and its Products," 198–201

EGLOFF, G., Modern Methods of Motor Fuel Production, 173–192

EMERY, D. J., on the 1944 edition of "Standard Methods," 204–205

EVANS, E. A., on Refining Terminology, 12

——, on the 1944 edition of "Standard Methods," 204, 205, 208, 210

EVANS, E. B., on the 1944 edition of "Standard Methods," 204, 208

GARNER, F. H., on the late Christopher Dalley, 90

——, on the 1944 edition of "Standard Methods," 202

——, on Mountains and Oil, 254

——, on Geophysical Methods applied to Oil Prospecting, 311

——, on "Oil Prospects in Portugal," 384

GOODAY, W. E., on Lubricating Oils in Service, 130–131

GRAY, C. G., Properties and Utilization of Petroleum Waxes, 57–67

GRUSE, W. A. *See* SANDS, T. P.

HALSE, G. W., Water for Oilfields Development, 313–324

HARRISON, J. V., Mountains and Oil, 243–253

——, on Mountains and Oil, 254, 255

HEARN, A. C., on the late Christopher Dalley, 152

HOWES, D. A. *See* KELLY, M. E.

HURT, R. F., on the 1944 edition of "Standard Methods," 203–204

HYAMS, H., on the 1944 edition of "Standard Methods," 209

JACKSON, J. S., on the 1944 edition of "Standard Methods," 202–203, 204, 208

KELLY, M. E., and HOWES, D. A., Petroleum Refining Terminology—Benzine Manufacture and Refining, 1–12

LAPITZKY, M. M., and THOMPSON, S., Miniature and Micro Suspended Level Viscometers, 349–350

LEES, G. M., on Mountains and Oil, 254–255

——, on "Oil Prospects in Portugal," 384

LIVINGSTONE, C. J. *See* SANDS, T. P.

MASKELL, L. O., on the 1944 edition of "Standard Methods," 206–207

MEYER, P., Practical Alignment Chart for Fluid Flow in Pipe-Lines, 52–56

MUSKAT, M., *see* BOTSET, H. G.

MYDDLETON, W. W., The Application of Free Energy Equations to the Study of the Synthesis of Hydrocarbons from Carbon Monoxide and Hydrogen, 212–224

NAME INDEX.

ANFILOGOFF, N. L., on the 1944 edition of "Standard Methods," 207, 208, 209

AULD, S. J. M., on the late Christopher Dalley, 90

BEECROFT, G. F., on the 1944 edition of "Standard Methods," 205–206, 207, 208, 209

BLACKMORE, H. A., Calculation of the Volumes contained in the partially filled Dish Ends of Horizontal Cylindrical Tanks, 167–170

BOND, G. W., on Lubricating Oils in Service, 128–130

BOTSET, H. G., and MUSKAT, M., The Study of Reservoir Fluids by Surface Recombination Experiments, 351–369

BROOM, W. E. J., on the 1944 edition of "Standard Methods," 210

BRUCKSHAW, J. McG., Geophysical Methods Applied to Oil Prospecting, 271–310

——, on Geophysical Methods Applied to Oil Prospecting, 311, 312

CANTOR, J., on the 1944 edition of "Standard Methods," 205

DALLEY, C., at Thirtieth Annual General Meeting, 21

DEWHURST, T., on Refining Terminology, 11

DIESEL INDEX PANEL, The Correlation of Cetane Number with other Physical Properties of Diesel Fuels, 193–197

DUNSTAN, A. E., on Refining Terminology, 11

——, on the late Christopher Dalley, 91, 150

——, on the 1944 edition of "Standard Methods," 210

EBY, H. M. *See* STROSS, M. J.

EDITORIAL SUB-COMMITTEE, The 1944 Edition of "Standard Methods for Testing Petroleum and its Products," 198–201

EGLOFF, G., Modern Methods of Motor Fuel Production, 173–192

EMERY, D. J., on the 1944 edition of "Standard Methods," 204–205

EVANS, E. A., on Refining Terminology, 12

——, on the 1944 edition of "Standard Methods," 204, 205, 208, 210

EVANS, E. B., on the 1944 edition of "Standard Methods," 204, 208

GARNER, F. H., on the late Christopher Dalley, 90

——, on the 1944 edition of "Standard Methods," 202

——, on Mountains and Oil, 254

——, on Geophysical Methods applied to Oil Prospecting, 311

——, on "Oil Prospects in Portugal," 384

GOODAY, W. E., on Lubricating Oils in Service, 130–131

GRAY, C. G., Properties and Utilization of Petroleum Waxes, 57–67

GRUSE, W. A. *See* SANDS, T. P.

HALSE, G. W., Water for Oilfields Development, 313–324

HARRISON, J. V., Mountains and Oil, 243–253

——, on Mountains and Oil, 254, 255

HEARN, A. C., on the late Christopher Dalley, 152

HOWES, D. A. *See* KELLY, M. E.

HURT, R. F., on the 1944 edition of "Standard Methods," 203–204

HYAMS, H., on the 1944 edition of "Standard Methods," 209

JACKSON, J. S., on the 1944 edition of "Standard Methods," 202–203, 204, 208

KELLY, M. E., and HOWES, D. A., Petroleum Refining Terminology—Benzine Manufacture and Refining, 1–12

LAPITZKY, M. M., and THOMPSON, S., Miniature and Micro Suspended Level Viscometers, 349–350

LEES, G. M., on Mountains and Oil, 254–255

——, on "Oil Prospects in Portugal," 384

LIVINGSTONE, C. J. *See* SANDS, T. P.

MASKELL, L. O., on the 1944 edition of "Standard Methods," 206–207

MEYER, P., Practical Alignment Chart for Fluid Flow in Pipe-Lines, 52–56

MUSKAT, M., *see* BOTSET, H. G.

MYDDLETON, W. W., The Application of Free Energy Equations to the Study of the Synthesis of Hydrocarbons from Carbon Monoxide and Hydrogen, 212–224

NAYLOR, W. H., Spectral Methods and their Application to the Petroleum Industry, 256–265
NOMENCLATURE SUB-COMMITTEE, Preliminary List of Definitions, 266–270

PALLISER, W. E. M., on Lubricating Oils in Service, 132
POMEROY, R. G., The Contamination, Deterioration and Decomposition of Lubricating Oils in Service, 95–133
PRIVETT, E. B., on Lubricating Oils in Service, 132

RAYMOND, L., on Engine Testing, 74
RILEY, J. L. *See* STROSS, M. J.
ROHR, K., Orientated Hand Coring in Geological Field Work, 79–89
ROSENFELD, L., on the new edition of "Standard Methods," 209–210

SANDS, T. P., LIVINGSTONE, C. J., and GRUSE, W. A., Some Ideas about Correlation of Test-Engine Results, 68–74
SEAMARK, M. C., Drilling, 134–149
SMITH, I. C. P., Sintered Glassware, 385–387
SOIL STABILIZATION PANEL, Report on Tests for Soil Stabilization, 327–348
SPEARING, C., on the late Christopher Dalley, 152
STANDARDIZATION SUB-COMMITTEES, Reports, 25–51
STROSS, M. J., RILEY, J. L., and EBY, H. M., Permeation of Hydrocarbon Gases through Rubber Tubing, 153–166

TEMPLETON, J. C., on Geophysical Methods Applied to Oil Prospecting, 311–312
THOMPSON, A. BEEBY, Oil Prospects in Portugal, 370–383
——, on "Oil Prospects in Portugal," 384
THOMPSON, S. *See* LAPITZKY, M. M.
THORNTON, E., on Mountains and Oil, 255
TWEED, R. R., on the late Christopher Dalley, 151

UNDERWOOD, A. J. V., Fractional Distillation of Binary Mixtures. Simplified Computation of Theoretical Plates and Transfer Units, 225–242

WARD, R. J., on Refining Terminology, 12
WHITTINGHAM, R. R., on Lubricating Oils in Service, 123–128

SUBJECT INDEX.

Binary Mixtures, fractional distillation of, 225–242

Cetane Number, correlation with other physical properties of diesel fuels, 193–197

Definitions, 266–270
Drilling, 134–149

Fluid Flow in Pipe-Lines, Chart for, 52–56

Hand Coring, orientated, 79–89
Hydrocarbon Gases, permeation through rubber tubing, 153–166
Hydrocarbons, study of synthesis, 211–224

Lubricating Oils, contamination, deterioration and decomposition in service, 95–133

Motor Fuel, modern methods of production, 173–192
Mountains and oil, 243–255

Oil Prospecting, application of geophysical methods to, 271–312

Portugal, oil prospects in, 370–383

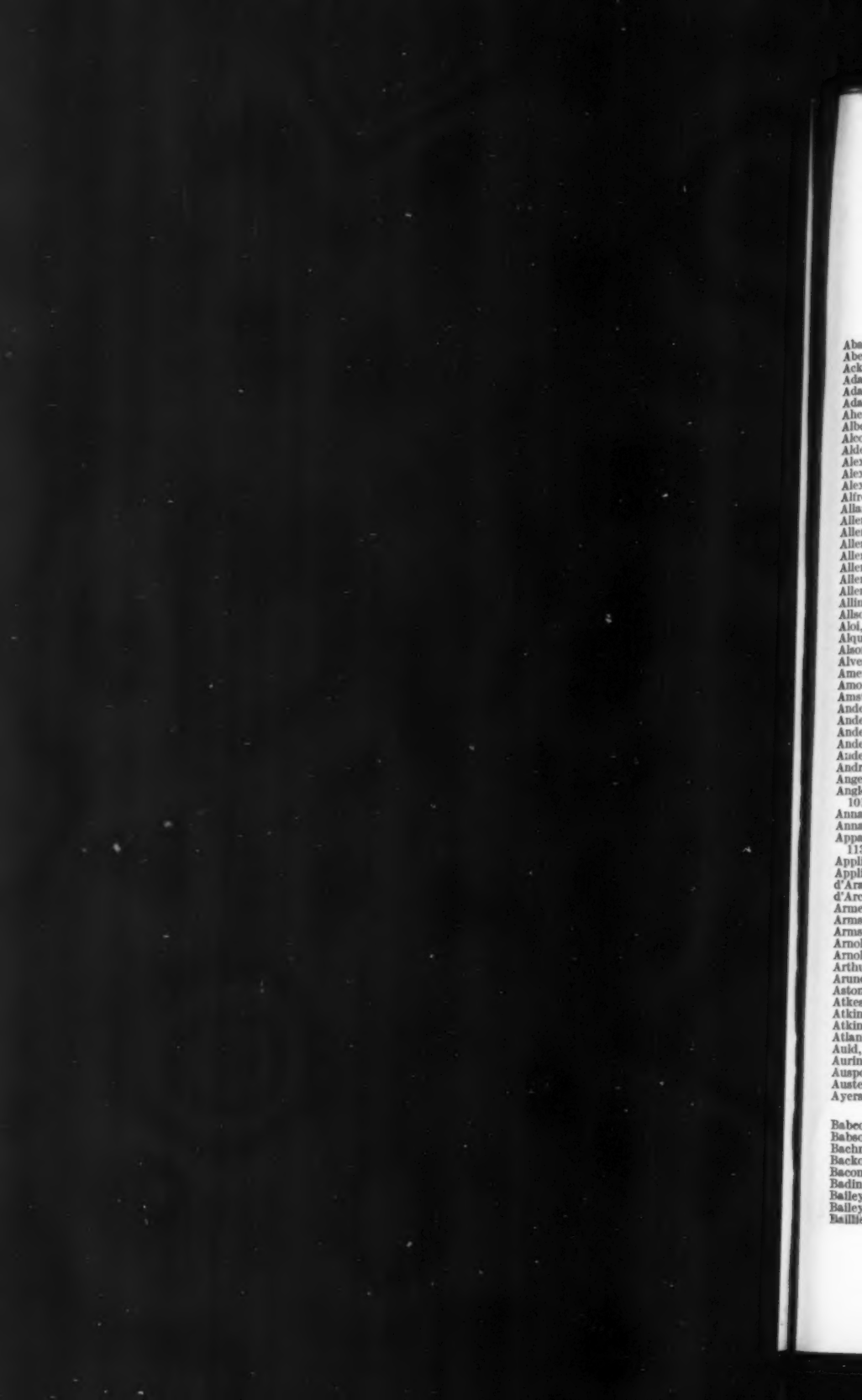
Reservoir Fluids, study of, 351–369

Sintered Glassware, 385–387
Soil Stabilization, 327–348
"Standard Methods for Testing Petroleum and its Products," 1944 edition, 198–210
Standardization Committee, Sub-Committees' reports, 25–51

Tanks, horizontal cylindrical, volume calculation, 167–170
Terminology, petroleum refining, 1–12
Test-Engine Results, correlation, 68–78

Water for Oilfields development, 313–323
Waxes, Petroleum, properties and utilization, 57–67

Viscometers, miniature and micro suspended level, 349–350



ABSTRACTS AUTHOR INDEX.

Numbers refer to Abstract numbers.

Abadie, H. G., 1221
Abegg, W. A., 767
Ackers, A. L., 876
Adams, G. L., 610
Adams, O., 153
Adams, R., 632
Abe, K. L. Vonder, 610
Albertson, M. M., 767
Alcorn, I. W., 52
Alden, R. C., 362
Alexander, D., 1345
Alexander, E. L., 876
Alexander, F. I., 189
Alfrey, T., 1342
Allan, H., 498
Allen, C. F. H., 527, 1470
Allen, C. L., 189
Allen, C., 189
Allen, H., 610, 767
Allen, H. V., 1336
Allen, J. van, 1470
Allen, L. H., 380
Allinson, J. J., 552
Allsopp, C. B., 1467
Aloi, M. F., 1426
Alquist, F. N., 189
Alson, G., 550
Alves, H. A., 995
Amero, R. C., 200
Amore, S. T., 786
Amstutz, P. T., 1220, 1304
Anderson, A. P., 548
Anderson, G. N., 189
Anderson, N. K., 367
Anderson, O. B., 356
Anderson, R. O., 1426
Andrews, D. H., 236
Angell, C. H., 360
Anglo-Iranian Oil Co., 898, 1011
Annabel, W. C., 120
Annand, P. N., 1018
Appalachian Geological Society, 1139
Applin, E., 857
Applin, P., 857
d'Aragon, H. J., 981
d'Arcy, N. A., 1397
Armentrout, A. L., 189
Armstrong, J. W., 279
Armstrong, W. J., 1371
Arnold, J. C., 767
Arnold, W. P., 552
Arthur, M. G., 965
Arundale, E., 898
Aston, J. G., 260, 305, 780
Atkeson, F. W., 1264, 1265
Atkins, G. T., 85
Atkinson, R. G., 1334
Atlantic Refining Co., 889
Auld, D. W., 356, 1426
Aurin, F. L., 1144
Auspos, L. A., 529
Austen, A. E. W., 1403
Ayers, E. B., 235

Babcock, E., 189
Babson, E. C., 672
Bachmann, W. E., 514
Backoff, W. J., 1127
Bacon, T. S., 1208, 1218
Badin, E. J., 781
Bailey, J. E., 184
Bailey, W. C., 3
Baillie, J. C., 391, 1433
Baker, R. C., 189, 876
Ballard, H. W., 356, 663
Bancroft, C. C., 1426
Bannon, L. A., 458
Banta, H. E., 1092a
Barish, E. Z., 201, 203, 204
Barkley, J. E., 265
Barlow, R. G., 610
Barnard, D. P., 1225, 1354
Barnes, B. H., 189
Barnet, R. S., 1259
Baron, H., 1269
Barrer, R. M., 999, 1000
Barron, J. M., 1433
Barry, A. F., 736
Barstow, O. E., 1426
Bartlett, J. F., 530
Bartlett, P. D., 242
Barton, A. C., 1331
Barton, P. D., 769, 777
Bartovics, A., 1342
Baskin, C. M., 1502
Bassinger, R., 356, 876
Bates, F. W., 1390
Bates, J. R., 776
Battle, J. L., 1426
Baum, V. E., 48
Baumann, C. A., 528
Beach, F. K., 160
Bean, R. N., 498, 767
Beaton, P. D., 498
Becker, H. A., 367
Beckinsale, S., 293
Beckman, F. G., 767
Beckman, M. W., 1041
Beer, R. F., 951
Beerbower, A., 1501
Behnke, G. E., 498
Belcher, R., 445
Bell, A. H., 969, 1137
Bell, E. P., 784
Benedict, W. L., 360, 808
Benson, R., 504
Benenati, R. F., 1234
Bennett, E. C., 1213, 1239
Bennison, E. W., 1426
Benz, L. W., 1426
Bergen, D. E., 1501
Berger, C. W., 381, 1248
Berger, H. G., 902, 918
Berger, L. B., 651
Bergmann, F., 517, 518
Berliner, E., 252
Bertetti, J. W., 440
Berwald, W. B., 609
Betz, J. D., 87
Bevan, R. L., 363
Biddison, P. McD., 62
Biesele, R. G., 736
Bikerman, J. J., 286
Billmeyer, F. W. Jr., 390
Bilmes, L., 1469
Binder, R. C., 1226
Biesel, 105
Bishop, O. L., 1426
Biske, V., 140
Blackburn, L. A., 1426
Blade, O. C., 1375
Blair, C. M., 356
Blakeley, T. H., 278
Blaker, D. G., 371
Blankenhorn, C. F., 1426
Blau, L. W., 610, 1426
Bloch, H. S., 898
Boehm, A. B., 116
Bogen, J. S., 1372
Bohmer, C. W., 1259
Bond, D. C., 864, 1191
Bond, R. L., 547
Bondi, A., 119
Bonotto, M., 1340
Booth, A. E., 979
Booth, N., 198, 1434
Boots, P. H., 952
Borden, J. L., 1135
Bordwell, F. G., 402
Borglin, J. N., 903
Borgmann, A. R., 1264, 1265
Born, K. E., 1285, 1386
Born, W. T., 1901
Bossler, R. B., 1210, 1212
Bower, J. R., 1006
Bowman, J. R., 289
Boyd, F. C., 610
Boynton, A., 767, 876
Bracey, P., 915
Bradford, W. G., 876
Bradley, W. E., 212
Bradsher, C. K., 399, 532, 533, 786, 791, 1472
Brady, L. J., 1493
Bragg, L. B., 505
Braithwaite, A. W., 876
Braker, E. A., 747, 761
Brandon, R. C., 381, 1454
Brandon, T. W., 1500
Brandt, D. G., 898, 1254
Branker, A. V., 895, 1004
Brankstone, H. R., 948
Brant, J. H., 228
Brantly, J. E., 307, 610
Brauer, W., 1426
Bredenbeck, B. C., 189
Breukelman, C. W., 876
Brickwedde, F. G., 1486
Bridwell, C. E., 1426
Briggs, F., 41, 54, 58
Brightwell, W. J., 767
Brisales, F. J., 1504
Bristow, W. A., 154
Broeck, H. T., 883
Bromley, L. A., 1442
Brothman, A., 201, 203, 204
Brown, A. B., 656
Brown, B. K., 1354
Brown, C. A., 498
Brown, C. C., 1426
Brown, C. L., 364, 454, 879
Brown, G. G., 442, 1424
Brown, H. T., 253
Brown, J. E., 812
Brown, L. E., 610
Brown, M. E., 1363
Brown, M. G., 541
Brown, R. W., 1426
Bruce, W. A., 1301
Brummleu, E. C., 1426
Bruner, F. H., 371
Brunner, E., 175
Brusic, J. P., 629
Buchan, R. C., 189
Buchman, E. R., 243
Buck, A. C., 393
Buckley, S. E., 767
Buckley, W. D., 1348
Budenholzer, R. A., 269
Buerschaper, R. E., 1125
Buhle, E. L., 405
Bullock, J. L., 795
Burchfield, P. E., 238

Burks, R. E., 889
Burnam, T. W., 189, 1426
Burnett, T. J., 1134
Burns, E., 610
Burrill, C. L., 1528
Burruss, G. H., 772
Burt, C. E., 189
Burwell, A. W., 1259
Burwell, J. T. Jr., 1258
Busbey, R. L., 1016
Bush, R. D., 156, 920
Buthod, P., 1241, 1243, 1245, 1247, 1338, 1339, 1444, 1445, 1448, 1449, 1451, 1452, 1453, 1495
Butler, J. K., 767
Byck, H. T., 498
Bynum, P. T., 189
Byram, R. W., 182
Byrkit, G. D., 547, 1259, 1360, 1501
Byrns, A. C., 212

Cable, J. H., 353
Cade, A. R., 644
Caldwell, W. T., 498, 610
Calhoun, J. C., 1202, 1215
Calkins, A. E., 1501
Camp, J. M., 876
Campbell, F. F., 1094
Campbell, G. A., 1365, 1507, 1519
Campbell, J. L. P., 597
Campbell, K. N., 511
Cannon, G. E., 767, 876, 1426
Cantin, C. C., 498
Cantrill, C., 549
Capell, R. G., 200
Cardwell, W. T., 966
Carlson, F. W., 1266
Carnahan, F. L., 1461
Carpenter, G. W., 611
Carr, D. E., 903, 1340
Carriel, J. T., 563
Carroll, D. L., 26, 30, 163, 169, 319, 329, 337, 473, 566, 585, 601, 1070, 1083, 1171, 1272, 1403
Carruthers, R. L., 1426
Carter, E. L., 498
Carter, W., 1017
Cashion, M. L., 173
Cass, C. B., 542
Cavaglieri, 422
Cawley, C. M., 261, 810, 811, 1468
Cerf, B., 180
Cesana, O. C., 649
Chambers, H. E., 69
Chambers, L. S., 1426
Champion, F. A., 1439
Chanan, H. H., 1477, 1478
Chapman, T. S., 189
Chenault, W. B., 381
Chenault, R. L., 1426
Chenicek, J. A., 381, 898, 1254
Chidjevsky, N. P., 1312, 1318
Childs, W. L., 1426
Chollar, R. G., 1511
Church, W. L., 189, 876, 1426
Clark, C. L., 191
Clark, S. K., 751, 963, 967, 972
Clark, W. A., 1110, 1189
Clarke, L. F., 1356
Claudet, A., 498
Claussen, W. H., 1454
Claxton, G., 1527
Clayton, J. C., 547, 902
Cleveland, F. F., 424
Clifton, R. L., 662
Cloud, G. H., 899
Clough, J., 1440
Coates, N. C., 610
Coberly, C. J., 189, 767
Cochrane, H. G., 1177, 1398
Cockburn, M. B., 189
Cockrell, W. D., 94, 635
Cockrum, H. L., 498
Cohan, L. H., 907
Cohen, C. A., 381, 889
Cohen, S. G., 242
Colbeck, E. W., 1438
Cole, T., 1037
Cole, W. G., 1348
Collins, C. P., 1426
Colwell, A. T., 1010
Connolly, G. C., 1316, 1433
Conrad, H. L., 189
Conrad, J. C., 189
Cook, A. B., 753, 964
Cook, E. W., 458, 547
Cook, K. H., 237
Cook, W. A., 237
Cooke, A. C. H., 40
Cooke, L. M., 1006
Cooley, C. G., 767
Cooley, H. M., 732, 1181
Cooper, G. A., 1039
Cooper, W. F., 295, 1455
Cope, J. Q., 1454
Coqueron, F. G., 157, 1374
Corn, L. H., 1462
Cortes, G. D., 514
Cottingham, V. E., 602, 1205
Coulson, E. A., 263
Court, J. M. A., 280
Cowles, H. C., 284
Cox, A. J., 1267
Coxens, F. R., 59, 344, 873, 1199
Crafton, H. C., 1268
Cragoe, S., 1487
Craig, D., 420
Crake, W. S., 595, 610, 1426
Crawford, F. W., 1494
Creelman, G. D., 1496
Crickmer, C. S., 189
Critchfield, R. N., 1522
Crites, W. J., 189, 1426
Croix, H. N. la, 886
Cronels, C., 1384
Crook, W. M., 189
Crouch, L. E., 189
Crouch, W. W., 248, 392, 418, 419
Crouse, W. H., 1522
Crowell, A., 604
Culkins, A. E., 1259
Cummins, W. E., 1426
Cunneen, J. I., 437
Curtis, J. H., 542
Curtis, R. R., 556
Curtis, W. H., 556

Dahlgren, E. G., 741, 1390
Dailey, B. P., 383, 384
Danforth, J. D., 1433
Daniel, F. K., 189
Daniels, C. A., 1184
Darley, R. E., 1501
David, W. A. L., 915
Davidson, D., 1484
Davidson, R. C., 84
Davidson, R. R., 446
Davies, E. R. H., 279
Davis, G. H. B., 1259
Davis, L. L., 547, 1259
Davis, R. R., 435, 436
Davis, S. B., 214, 217, 218
Davis, T. W., 221, 1306
Dawson, R. D., 1426
Deahl, T. J., 175
Dean, R. B., 1126
Deegan, C. J., 945, 1276, 1277, 1412
Deely, C. L., 498
Degering, 226, 409
Denison, A. R., 316, 674, 922
Dennis, E. L., 622
Deno, N. C., 241
Deschner, R. E., 876
Detling, K. D., 876
Diamond, H., 902
Dickey, P. A., 38, 348, 354, 494, 1132, 1212
Dickinson, R. G., 519
Dickson, W. A., 356
Diehl, F. A., 189
Dilley, G. D., 767
Dillon, L., 498
Dimit, C. E., 184
Division of Occupational Hygiene, Massachusetts, 809
Dix, C. H., 1103
Dobbin, C. E., 1034
Dobson, W. M., 876
Dodson, C. R., 966
Doering, W. E., 214, 215, 216
Doll, H. G., 36, 610
Doman, C. T., 652
Dorinson, A., 246
Dotterweich, F. H., 1314
Downing, F. B., 1501
Downs, G. F., 876
Dralle, H. E., 540
Dreyer, R. M., 661
Driver, H. L., 1376
Dryer, C. C., 189
Due, J. P. la, 1014
Dunham, R. A., 459
Duval, R. H., 498

Earlougher, R. C., 495, 974
Eastman, du B., 898
Ebner, E. E., 997, 1333
Eby, J. B., 938
Eckel, J. E., 498
Eckhardt, E. A., 862
Eddins, W. N., 767
Editorial Staff, Chem. Met. Engr., 1236
Egloff, G., 454, 897, 898, 1223, 1224, 1254, 1345, 1430, 1432
Eisler, J. D., 1098
Elder, T. G., 1429
Elias, W. M., 1188, 1294
Elliott, M. A., 651
Elliott, O. M., 779
Ellison, H. W., 1306
Endersby, V. A., 551
English, J. Jr., 422
Emmett, P. R., 421
Erb, C. E., 86
Erickson, D., 610
Erkert, F. G., 498
Ericsson, R. L., 281
Eschinazie, H. E., 517, 518
Evans, E. A., 451
Evans, L. P., 368, 614
Evinger, H. H., 1104
Exline, P. G., 289

Faassen, J. W., 1457
Fadden, L. R., 1260
Fairbank, C. O., 338
Fales, J. H., 646
Fan, S., 426
Farmer, E. H., 437
Farmer, J. O., 607
Farquhar, J. P., 243
Farr, J., 521
Farrand, W. H., 1110, 1189
Farrington, B. B., 547, 902
Farthing, V. L., 455
Faust, J., 636
Faust, P. H., 1346
Fearon, R. E., 1426
Fehr, C. M., 143, 209
Feldman, J., 1484
Feising, W. A., 383, 384, 385, 510, 628
Fenske, M. R., 1461
Fenton, G. W., 276
Ferguson, W. J., 1486
Fernelius, W. C., 239
Fettke, C. R., 354
Fielding, J. H., 465
Fieldner, A. C., 1352
Fields, B. K., 1483
Fieser, L. F., 787

Fiest, W., 538
Fife, J. G., 998
Finch, L. Jr., 1188, 1294
Finger, G. C., 1251
Fink, H. L., 260, 395
Finley, W. L., 1360
Fischer, C. A., 876
Fischer, F., 538, 1003, 1347
Fischer, H. G. M., 364, 542, 879, 1454
Fischer, F. K., 1271
Fisher, G. H., 498, 876
Fitch, H. M., 1501
Fleming, J. E., 356
Flanagan, J. V., 793
Flannagan, G. N., 240
Flaxman, M. T., 767
Fleiche, P. la, 1283
Flett, L. H., 610
Flint, J. F., 865
Flory, P. J., 224, 256
Flynn, A. K., 189
Folk, S., 1145
Folkers, K., 259
Fon, R. A., 73
Ford, T. F., 610
Forrester, J. H., 1225
Fortune, J. C., 876
Forziate, A. F., 634
Fossati, P. N., 189
Foster, A. L., 89, 129, 206, 555, 639, 640, 808, 1020, 1227, 1357, 1435, 1446, 1497
Foster, R. L., 356
Foster, W. W., 189
Foulk, C. W., 265
Frack, M. W., 189
Francis, A. W., 1458
Francis, L. K., 144
Frank, R. L., 292
Franz, E. R., 498
Frazer, J. C. W., 253
Frazier, R. le R., 902
Free, G., 898, 1229, 1496
Freeland, J. W., 498
Freeman, H. E., 356
Fremon, G. H., 1252
Frewing, J. J., 1012
Frey, D. R., 458
Frey, F. E., 208, 794, 898
Frolich, P. K., 186, 902
Frost, A. V., 1431
Fry, A. S., 1370
Frye, A. L., 876
Fryer, H. C., 1265
Fuchs, G. H. von, 902
Fuener, W. V., 1229, 1436, 1496
Fuidge, G. H., 1033
Fuller, E. W., 902, 918
Fulton, R. A., 1016
Funk, F. A., 876
Furse, D. H., 189

Gabriel, L. G., 903
Gahan, J. B., 1015
Gallay, W., 429, 430
Gallie, J. F., 912, 1362
Gal'pern, G. D., 361
Ganley, W. H., 68
Gardner, R. I., 356
Garfield, L. E., 498
Garnett, S., 989
Garrison, A. D., 610, 1426
Gasline, J. E., 610
Gatchell, R. J., 876, 1426
Gates, J. W. Jr., 527
Gaylor, P. J., 1254, 1496
Gaynor, J. W., 547
Gee, W. P., 889
Gemant, E., 118, 287
Gerasimov, M. M., 90
Gerhold, C. G., 770
Germann, F. E. E., 892
Germann, R. P., 892
Gersdarff, W. A., 647
Gertler, S. I., 647
Gilbert, C. M., 1044
Gilbert, G. R., 1259
Gilbert, W. E., 1426
Gill, S., 773
Gillam, A. E., 1510
Gilman, H., 391, 397
Gilson, A. R., 271
Ginell, R., 415, 416
Gleason, T., 767
Glenn, R. D., 1252
Glistch, H. C., 356
Glushnev, V. E., 90
Goggin, W. C., 911
Gohr, E. J., 364, 879
Gold, H. M., 537
Goldfinger, G., 520
Golding, D. R. V., 1471
Goldstone, F., 6, 1377
Gonzales, R. J., 1380
Gooderham, W. J., 1491
Goodhue, L. D., 1261
Goodloe, P. M., 902
Goodwin, H. S., 552
Gordon, J. D., 1121
Gordy, J. S., 189
Grasal, G., 1436
Gray, C. G., 648
Grayson, R. P., 498
Green, A. A., 804, 1027
Green, B. K., 1511
Green, G., 610
Green, H., 288, 1124
Green, W. E., 876
Greenburg, L., 904
Greene, H. H., 876
Greenlee, K. W., 239, 788
Gries, J. P., 1045
Griffin, G. G., 1335
Griffith, L. W., 1492
Groetjen, F. A., 189
Groote, M. de, 189, 498, 767, 876, 1426
Gross, H. E., 957, 1190
Grosse, A. V., 229, 370, 1230, 1433
Grote, H. W., 454
Gruetjen, F. A., 1426
Grumbaugh, L., 767
Grummit, O., 393
Gruse, W. A., 638
Gunther, F. A., 1014
Guthrie, G. B., 257
Guyod, H., 1298
Gwyn, H. M., 1326, 1327
Gwynn, B. H. 226
Gzemski, F. C., 902

Hackett, W., 1503
Haensel, V., 1254
Hagg, A. C., 1257
Hall, C. C., 261, 1468
Hall, D. A., 109, 290
Hall, J. L., 1428
Hall, W. P., 524, 525
Halliburton, E. P., 876
Hambly, A. E., 189
Hamer, P., 1438
Hamilton, L. A., 902, 918
Hancock, W. T., 360
Hanes, D., 356
Hanna, M. A., 660
Hannay, N. B., 785
Hansen, H. A., 189
Hanson, G. B., 893a
Happel, J., 60
Harbison, D. T., 876
Hardenberg, H. J., 1138
Hare, D. G. C., 498, 876, 1426
Harris, F. W., 1426
Harris, S. A., 259
Harris, T. S., 189
Harrison, T. S., 274
Harroun, B. A., 876
Hart, M. L., 876
Harth, P. H., 876
Haskelberg, L., 1485
Haskell, N. A., 1099
Hass, H. B., 282
Hassler, G. L., 175, 876
Hastik, J. J., 1426
Hatch, G. B., 1356
Hatfield, G. A., 767
Hattan, M., 189
Hauser, C. R., 235
Hay, A. W., 428
Hays, H. L., 898
Hays, R. R., 876
Hayward, J. T., 767
Hazen, L. L., 189
Headle, A. J. W., 1119, 1428
Heath, D. P., 60
Heath, W. A., 603, 1426
Hedges, C. C., 767
Heigl, J. J., 610
Heilman, W. O., 508
Heinemann, H., 626
Heldman, J. D., 792, 1480
Heimens, C. J., 1315
Henderson, H. I., 1179
Henderson, L. M., 120
Hendrickson, L., 431
Henne, A. L., 406, 513, 788, 793, 1477, 1478
Hennion, G. F., 234, 247, 258, 529, 784, 800
Henricks, R. A., 876
Henshall, T., 262
Herbst, W. A., 898
Herman, 630
Heroy, W. B., 1378
Hersberger, A. B., 284
Hertel, R. K., 610
Herzog, G., 1426
Highfield, J. S., 996
Hilditch, T. P., 1498
Himel, C. M., 227
Hill, E. S., 889
Himer, C. M., 534
Hill, W. H., 358
Hipple, J. A., 249, 250, 540
Hirsh, R. E., 1461
Hirshberg, Y., 1485
Hjelte, S. M., 1260
Hoar, T. P., 103
Hoback, J. N., 530
Hobson, G. D., 1142
Hochgesang, F. P., 1005
Hodges, C. E., 116
Hodges, F. C., 1128
Hodgson, H. H., 435, 436
Hoffert, W. H., 1527
Hoffos, J. E., 356
Holander, A., 189
Holleron, W. K., 189
Holley, R. W., 292
Holliman, W. C., 133
Holm, M. M., 1254
Holmes, W. C., 863
Holom, H. K., 381
Holtz, J. C., 651
Hondry, E. J., 898
Hoot, C., 689, 818
Hoover, C. O., 889
Hoover, H. Jr., 189
Hornaday, G. F., 542
Hornberg, C. V., 614
Hornberg, S. V., 368
Hornberger, J., 168
Horner, W. L., 189, 346, 351, 746, 876, 1029
Horvitz, L., 767
Howard, R. D., 1454
Howard, R. H., 498
Howard, W. V., 722, 675, 726, 830
Howell, G., 158
Howells, W. C., 663
Howes, D. A., 506
Hubbard, R. H., 442
Huber, C. F., 222
Huffman, H. M., 257, 531
Huggins, M. L., 245
Hughes, E. C., 889
Humason, G. A., 767

Hume, G. S., 851, 1089
Humphrey, I. W., 547
Hunter, L., 1464
Huntington, R. L., 342, 803, 1002, 1198, 1224, 1332, 1337
Hurdis, E. C., 225, 251
Hutcheon, A. T., 431
Hyde, M. A., 1325

Ibing, G., 112
Ickes, H. L., 842
Imlay, R. W., 1036
Ingram, G., 277
Ingram, T. R., 686
Inskeep, G. E., 596
International Catalytic Oil Process Corp., 986
Ipatieff, V. N., 371, 381, 801, 1254
Irany, E. P., 516
Irvine, J. W. Jr., 1258
Irwin, E. M., 498
Irwin, J. S., 663
Ittner, M. H., 458
Ivanovsky, L., 304
Iverson, J. O., 770

Jacobson, E. W., 1253
Jackes, H. D., 1029
Jakosky, J. J., 498, 661
James, J. H., 898
James, W. H., 631
Janes, J. R., 1475, 1476
Jarvis, W. L., 347
Jayne, D. W., 189
Jean, J. W., 542
Jenkins, O. P., 668
Jenkins, S. H., 74
Jenkins, V. N., 130, 458
Jenkner, A., 468
Jens, A. A., 180, 767, 876, 1426
Jessen, F. W., 1117, 1302, 1426
Jewett, J. M., 1043
Johnson, D., 1385
Johnson, J., 610
Johnston, H. W., 1479
Johnston, M. O., 610
Johnston, N., 349
Johnston, W. T. G., 433
Johnstone, W. W., 381
Jolley, L. J., 198
Jones, C. K., 1454
Jones, C. L., 1363
Jones, G. D., 231
Jones, J. L., 438
Jones, M. C. K., 381
Jones, N. C., 1456
Jones, P. H., 356, 767, 876
Jones, R. N., 782, 783
Jordan, L. L., 604
Josefwitz, D., 520

Kall, R. S., 1102
Kalbach, J. C., 1250
Kalichevsky, V. A., 542
Kalinsky, A. A., 1441
Kalmus, H., 1025
Kanhofer, E. R., 1356
Kaplow, E. J., 564
Kasline, F. E., 2
Kassel, L. S., 1437
Katz, D. L., 53, 67, 267, 343, 1425
Kavanagh, F. W., 547, 790
Keiser, B., 189, 767, 876
Kellog, H. B., 902
Kelly, F. R., 655
Kelly, M. E., 506, 806
Kemler, E. N., 75, 977, 978, 980, 1309
Kemp, A. R., 268
Kenalty, B. J., 432
Kendrick, C. M., 498
Kendrick, J. F., 498
Kennedy, H. T., 610

Keplinger, C. H., 876
Kharash, M. S., 1483
Kilmer, G. W., 254
Kimsey, W. L., 189, 610
Kind, F., 1465
King, H. L., 1326, 1327
King, R. O., 446
King, W. R., 767
Kingman, F. E. T., 810
Kinley, D. D., 1310
Kirby, J. M., 670
Kirkbride, C. G., 440
Kish, G. D., 461, 462
Kitchen, R., 787
Kitsman, W. L., 876
Kizziar, A. M., 189
Klein, F. D., 557
Kleinholz, M. P., 1360
Klotz, I. M., 1473
Knowles, E. C., 291
Koch, H., 112, 1347
Koch, H. P., 437
Koeln, C. C., 610
Koelsch, C. F., 425
Koester, E. A., 1136
Koffolt, J. H., 771
Kolin, A., 802
Komaresky, V. I., 76, 404, 807, 1228
Kornfeld, J. A., 471, 1073
Kornfeld, M. M. 953
Kossiakoff, A., 407
Kothny, G. L., 172, 767
Kramer, W. E., 289
Kraemer, A. J., 1375
Kribbs, G. R., 1141
Kritchevsky, T. H., 40
Kroenig, W., 1436
Krymova, L. G., 374
Ku, C. C., 342
Kubico, A., 537
Kummel, B., 665
Kunzler, L. A., 93
Kurtz, R. A., 258

Lacey, W. N., 269, 891, 1459, 1463
Lahee, F. H., 923, 1129, 1152, 1186
Laitinen, 232
Lamberger, E. H., 174
Lande, W. A. la, 885
Lane, E. K., 767
Lang, E. T., 1356
Larkin, J. F., 767
Larsen, R. M., 1140
Larson, C. M., 108
Lassiat, R. C., 125
Lassner, H. F., 502, 1323
Laughlin, C. D., 1326, 1327
Lauriston, V., 685
Law, J., 1303
Lawton, H. C., 1426
Lazar, A., 902
Lederer, E. R., 125
Lea, C. H., 1499
Leach, W. B., 1426
Lee, J. A., 298
Lee, M. W., 212, 1340
Lee, R., 381
Leeuwen, G. H. van, 180
Leighton, M. M., 852
Leighton, P. A., 792
Lemons, J. F., 385
Lerch, W. B., 876
Leverett, M. C., 189
Levine, P., 214, 219, 220
Levorsen, A. I., 5, 1143, 1382
Lewis, G. E., 498
Lewis, J. O., 341, 505
Lewis, T. B., 1426
Lieber, E., 458, 902, 1250, 1360
Lincoln, B. H., 547, 1250, 1360, 1501
Lingafelter, E. C., 412, 414
Linn, C. B., 229, 1230

Linstead, R. P., 214, 215, 216, 217, 218, 219, 220
Little, E. L. Jr., 515
Little, W. N., 47
Livermont, F. W., 498
Livingstone, C. J., 638
Lloyd, R. B., 767
Loane, C. M., 547
Lochte, W. L., 392, 418, 419
Lockte, H. L., 248
Logan, D. M., 1373
Logan, L. J., 832, 950, 1065, 1066, 1090, 1146, 1174, 1400
Long, A. Jr., 876
Loomis, A. G., 610
Lovell, L. G., 95
Lovell, R. C., 82, 205, 357, 501, 1322
Lovely, H. R., 667
Lowrey, G. A., 498
Lozo, F. E., 1387
Lucas, H. J., 389, 390
Lucht, F. J., 425
Luebkeman, J. D., 189
Luedeke, V. D., 1252
Lutz, W. A., 458
Lybyer, B. H., 876
Lyth, R., 456, 457

Maas, R., 379
Mair, J., 634
Mamedli, M. G., 546
Mann, F. H., 1455
Mann, T. L., 356
March, J. J., 309
Mare, P. B. D. de la, 433
Mark, H., 520, 1342
Markle, L. E., 1325
Maron, S. H., 223, 388
Marsh, J. L., 1252
Marshall, E. T., 898
Marshall, V. C., 92
Martin, H., 1520
Martin, J. T., 805
Martin, R. H., 1466
Marvel, C. S., 227, 231, 536, 1479, 1482
Mason, H. S., 411
Mastin, T. W., 231
Masser, H. L., 302
Mathis, C. H., 876
Matthews, T. A., 67
Mattox, W. J., 370, 1433
Matuszak, M. P., 381
May, W. G., 427
Mayer, E. L., 1015
Mayfield, E. A., 903
Mayo, F. R., 1343
Means, E. A., 1426
Mekler, V., 542
Melling, E., 910
Melton, H. E., 778
Menhall, J. W., 1426
Ment, J. de, 104
Merkt, E. E., 673
Mertens, F. T., 997, 1333
Meunier, A. C., 512
Meyer, C. A., 1271
Meyer, P., 625
Michael, A., 411
Middleton, A. W., 539
Mikeska, L. A., 458, 898
Milek, F. M., 1426
Miles, F. T., 266
Miles, T. K., 551
Miller, A. E., 381
Miller, E., 896
Miller, E. L., 1426
Miller, G. W., 610, 189
Miller, H. P., 189
Miller, J. A., 528
Miller, L. C., 189, 498, 876
Miller, M. C., 983
Miller, P., 454
Miller, W. G., 610
Millican, R. E., 1426

Mills, B., 975
Mills, K. N., 605
Minard, G. W., 771
Miners, K. A., 427
Minor, B. S., 189
Miser, H. D., 320
Mississippi Geological Society, 1381
Mitchell, E. T., 795
Mitchell, J. G., 278
Mitchell, R. W., 902
Monroe, R. B., 53
Montagnes, J., 170
Montgomery, J. B., 233
Moon, C. A., 1426
Moore, E. E., 876
Moore, H., 1019
Moore, J. W., 200
Moore, R. S., 389, 1422
Moore, T. V., 876
Moore, W. G., 1420
Moran, R. C., 902
Morgan, P., 545
Morgan, L. C., 498
Morgan, T. D., 1494
Moriarty, F. C., 993, 994
Morrell, C., 906
Morrell, J. C., 1433
Morris, H. M., 633
Morris, K. G., 1502
Morse, W. C., 1054
Morton, A. V., 515
Morton, B. B., 1122, 1240
Morway, A. G., 902, 1259
Mottlau, A. Y., 454
Mounce, W. D., 39
Mozingo, R., 259
Mueller, M. B., 534
Mullane, J. J., 1207
Muller, S. W., 669
Munday, J. C., 881
Munger, C. G., 984
Munk, W. P., 767
Munyan, A. C., 1040
Murphree, E. V., 364, 879
Murray, M. J., 424
Murray-Aaron, E. R., 1128
Musaev, G. A., 361
Musatov, K. A., 374
Musher, S., 1501
Muskat, M., 44, 545, 1104
Musselman, J. M., 547

McAfee, J., 367
McCarter, W. S. W., 885
McCleary, R. F., 547
McClow, 210
McCollum, L. F., 4, 7, 8, 1379
McCombie, H., 509
McCorkle, M. R., 246
McCoull, N., 543
McCoy, F. C., 291
McCoy, P. E., 1260
McCracken, J. H., 899, 1255
McCullough, C. J., 189, 1426
McDonald, J. S., 189
McDonald, L. L., 498
McEwen, J., 356, 498
McGouran, A. R., 646
McGovern, E. W., 450
McKay, G. H., 62
MacKusick, B. L., 995
McLaren, A. D., 1474
McLennan, L. W., 458
McLesse, S. F., 234
McMahon, J. R., 100
McNab, J. C., 1259
McNeil, D. J., 657
McNulty, G. M., 1259
McOmie, R. W., 1501
MacWilliams, L. L., 1426

Nametkin, S. S., 1313, 1319, 1320, 1341, 1349, 1361
Nebeck, H. J., 770
Neely, G. L., 547
Nelly, H. M., 773
Nelson, W. L., 66, 83, 106, 113, 641, 1447, 1450
Nettleton, L. L., 658, 1096
Neufeld, J., 1426
Neukom, O. W., 458
Neuman, L. J., 189
Neustatter, A., 117
Newman, M. S., 423
Newman, R. J., 770
Newton, A., 394, 796, 797, 798, 799
Newton, W. M., 767
Ney, W. O., 418, 419
Nicholson, G. F., 356, 610
Nightingale, D., 1475, 1476
Nili, E. A., 889
Nisle, R. G., 1106
Noble, W. B., 1426
Nord, F. F., 790
Norman, H. S., 678, 935, 1275
North Texas Geological Society, 1133
Noyes, R. M., 519
Nygaard, E. M., 381, 899, 1255

Oakes, M. C., 1043
O'Bannon, W. A., 1426
Oberfell, G. C., 71, 613, 1501
Ode, W. H., 1524
O'Donnell, J. P., 147, 199, 378, 612, 619, 643, 780, 836, 849, 1123, 1160, 1244, 1355
O'Donnell, L., 595
Ogarrio, R., 498
Old, R. E., 46
Olds, R. H., 891, 1459, 1463
O'Leary, C. M., 189, 610, 1426
Olive, T. R., 207, 211
Olsen, A. R., 535
Olsen, G. R., 64
Opocensky, W. J., 610
Osborne, J. L., 1501
Osborne, P. F., 841
Osmun, F. N., 767
Oswin, C. R., 273
Othmer, D. F., 441, 1234
Otis, H. C., 876, 1426
Overberger, C. C., 1482
Overholt, L. F., 560
Owens, F. C., 1131
Oxley, T. A., 1489

Page, J. S., 356
Paice, E. S., 1517
Pankratz, H. J., 189
Paquette, R. G., 412
Parent, J. D., 620
Park, S., 876
Parker, A. la R., 1013
Parker, F. D., 503
Parker, R. W., 70
Parkin, E. A., 804, 1027
Parkinson, D., 1508
Parrish, A. J., 610
Parsons, D. O., 530
Patterson, E. W., 876
Patterson, W. L., 876
Paulsen, H. C., 508, 889, 1454
Payne, J. W., 368, 614
Pearce, W. A., 968
Pearson, J. M., 359
Peck, R. E., 1442
Pelican, T. L., 1228
Penick, A. J., 498
Penick, L. T., 498
Percifield, C. N. Jr., 767
Perdew, W. H., 889
Perry, E. S., 1280
Peters, C. M., 767
Peters, H., 268
Pevere, E. F., 1356
Pew, J. E., 492
Pew, J. W., 1314
Phillips, G. E., 1248
Phillips, P. M., 1206
Phipps, J. T., 189, 876
Pick, A. W., 498
Pickston, P. W., 306
Pien, C. L., 1441
Pier, M., 898, 1229, 1496
Pieronek, H. V., 247
Piety, R. G., 498, 1426
Pigott, R. J. S., 1358
Pines, H., 371, 381
Pirson, S. J., 976
Pitts, C. A., 734, 956
Pitzer, E. C., 454, 627, 898
Plueddeman, E. P., 406, 513
Plummer, F. B., 659, 673
Plummer, W. B., 767
Pogue, J. E., 157, 1374
Pomeroy, R. G., 900
Pontecorvo, B., 1426
Pope, C. L., 199
Popenoe, W. P., 671
Pollitt, A. A., 294
Pool, J. W., 458
Pope, C. L., 200
Porter, H. R., 559
Porter, D. J., 1252
Postlewaite, W. R., 610
Potter, C. 803
Poutsilo, V. G., 1349
Powell, W. K., 598
Power, H. H., 673
Powers, D. D., 189
Pratt, J. M., 767
Pratt, W. A., 843
Prescott, H. R., 1092
Pressman, D., 389
Price, C. C., 222, 241, 398, 403, 1344
Price, P. H., 1119
Proell, W. A., 1255
Protin, E. J., 1426
Pruiett, C. L., 767
Prutton, C. F., 458, 547, 902
Pryor, C. C., 127, 142, 373, 463, 735, 744, 774, 950, 871, 1195
Pryor, R. C., 767
Puddington, I. E., 429, 430, 544
Pyle, J. J., 1366

Quebedeaux, W. A., 418
Q.A.R., 1023

Racine, E. O., 469
Ragatz, E. G., 503
Ralph, H. D., 128, 481
Rampino, L. D., 396
Randolph, M. T., 876
Rannefeld, C. E., 419
Ransome, W. R., 1097
Rapoport, L., 532
Rawlinson, J. A., 903
Ray, B. A., 1132
Raymond, E. F., 1426
Rayner, L. C. C., 1523
Raynor, G. A., 1426
Read, A. L., 894
Reagan, M., 189
Reamer, H. H., 891, 1459, 1463
Reaves, R., 578
Redemann, C. E., 270
Reed, D. W., 545
Reed, F. A., 610
Reed, H. L., 767
Reed, P., 750, 1111, 1112, 1116, 1197, 1307
Rehner, J., 908
Reid, E. E., 524, 525
Reid, L. S., 342
Reimers, H. A., 189
Rembert, W. E., 610
Reno, G. J., 267
Reswick, M., 466
Rice, F. O., 407
Ricker, N., 1093
Rideal, E. K., 439
Rice, H. T., 902
Rich, J. L., 856

Rieber, F., 1348
Rieff, O. M., 381, 458
Riegel, B. R., 537
Riesmayer, A. H., 1501
Riesz, C. H., 1228
Ritchey, H. W., 903
Roach, C. B., 1389
Roberts, O. L., 447
Roberts, S. M., 547
Robertson, P. W., 433, 434
Robey, R. F., 906
Robidoux, F. T., 767, 876
Robinson, J. F., 768
Rodd, C. C., 45
Roediger, J. C., 552
Roelen, O., 538
Rogers, D., 354
Rogers, F. H., 139
Rogers, M. F., 356, 1203
Rohr, K., 859
Roland, C. H., 67
Roldiger, J. C., 1260
Roishausen, F. W., 1302
Romberg, F., 1101
Roper, E. E., 1426
Rosaire, E. E., 814, 954, 1105
Rose, N. A., 1388
Rosen, R., 458, 1248, 1501
Rossini, F. D., 102, 634
Rossman, R. P., 300
Roth, R., 1042
Rouzer, W. H., 496
Rowe, O. R., 189
Rowland, C. S., 254
Royds, J. S., 751, 963, 967, 972
Rubin, L. C., 1356
Rudd, H. W., 1024
Ruddy, A. W., 410, 417
Ruedrich, P. M., 902
Rueggeberg, W. H. C., 408
Ruehrwein, R. A., 531
Rule, B. H., 498
Russell, H. Jr., 1471
Russell, R. P., 542
Rust, W. N., 39
Rutherford, J. T., 902
Ruthruff, R. F., 1356
Ryan, M. J., 242
Ryant, C. J., 213
Ryder, E. A., 543
Ryznar, J. W., 99

S.A.E. Sub-Committee on Maintenance Methods, 558
Saffer, A., 221
Sage, B. H., 269, 891, 1459, 1463
Sakmann, B. W., 1258
Salmi, V. A., 1360
Salmond, J., 132
Salverda, H. P., 1426
Sampson, J. B., 545
Sanborn, J. B., 885
Sanders, C. W., 1038
Sands, T. P., 638
Sandin, R. B., 787
Sargent, H., 243
Saunders, B. C., 509
Savitz, C. W., 189
Sawdon, W. A., 161, 159, 464, 596, 955, 960, 1185, 1219
Sawin, H. J., 673
Sawyer, F. G., 441
Sayles, D. C., 1483
Schaafsma, J. G., 1008, 1009, 1350
Schaphorst, W. F., 1030
Schenk, H. G., 669
Scherbatskoy, S. A., 1426
Schertz, G. L., 231
Schindler, H., 189
Schleseman, C. H., 1005
Schlumberger, M., 356, 876
Schmerling, L., 801
Schmidle, C. J., 800
Schmidt, L. A., 189
Schneider, H. G., 458
Schneider, W. T., 1085
Schramm, M. E., 1492
Schrenk, H. H., 651
Schulp, A. C., 543
Schomaker, V., 244, 523
Schulman, 103
Schulthels, H. L., 487
Schulze, R. K., 360
Schulze, W. A., 1315, 1356
Schumann, S. C., 395
Schwaderer, W. C., 108
Schwarz, M. W., 1237
Schweitzer, P. N., 114, 1031
Scoggin, B. L., 772
Scott, A. B., 413, 414
Scott, B. M., 876
Scott, D. W., 627
Scott, F. L., 498, 767
Scott, R. B., 1486
Scott, W. D., 1505
Scoville, L. P., 898
Seamark, M. C., 869
Secrest, L. C., 1329
See, M. J., 1433
Seger, F. M., 899, 902, 1255
Selberg, J. P., 356, 498
Seilmeyer, B., 371
Seilmeyer, G. J., 767
Selvig, W. A., 1524
Selwood, P. W., 633
Semenoff, N. N., 1369
Sewell, B. W., 189, 610, 876
Shabica, A. C., 526
Shaw, A. O., 1264
Shaw, J. F., 876, 1426
Shaw, S. F., 50, 1153
Shea, G. B., 43
Sheehan, J. V., 562
Shell Development Co., 998, 1011, 1368
Shelley, P. G., 1426
Shepherd, G. F., 1107
Sherborne, J. E., 349
Sherrill, R. E., 1274
Shore, W. J., 1235
Short, E. H., 570, 887, 727, 1180, 1423
Short, E. H. Jr., 181, 740, 757, 765, 1180, 1295, 1297, 1300
Shtchegloff, E. I., 1349
Shunk, C. H., 400
Sikes, S. T. Jr., 189
Silverman, D., 356, 767
Simha, R., 415, 416
Simonin, J. E., 1426
Simmons, A. C., 1211
Simons, H. P., 42, 171, 177, 180, 317, 490, 679, 682, 730, 731, 733, 737, 739, 856, 867
Simons, J. H., 512, 630
Simpson, F. M., 81
Simpson, T. P., 368, 614
Skau, N., 421
Slade, H. B., 1268
Smiley, T. F., 681, 693
Smith, A. J. G., 155
Smith, A. K., 458
Smith, A. L., 876
Smith, E. S., 399, 533
Smith, G. A., 498, 1426
Smith, G. F., 1007
Smith, G. J., 1130
Smith, J. C., 890
Smith, L. I., 386
Smith, R. C., 1264, 1265
Smith, R. H. 500
Smith, R. V., 101
Smith, S. S., 360
Smith, W. B., 300
Smyser, E. D., 876
Smyth, C. P., 251, 225, 785
Snow, D. R., 346, 351, 794, 1209
Solodovo, S. N., 90
Sonney, K. J., 970, 1200, 1201, 1204, 1305
South, J. A., 453
Spalding, J. D., 189
Sparks, W. J., 458, 899
Spencer, H. M., 240
Spencer, L., 189, 767
Spencer, W. D., 305, 653, 919
Sperling, C. C., 454
Sperry, D. R., 1443
Spiers, 1353
Spillane, L. J., 386
Spinks, J. W. T., 427, 431
Spooner, C. E., 445
Sprang, C. A., 409
Sprang, F. J., 767
Spurr, R., 244
Squires, F., 759, 969, 1216, 1291
Stahl, L. W., 356
Stafford, R. W., 68
Stancliffe, T. H., 498
Standard Oil Development Co., 881, 882, 1013, 1028, 1368
Standing, M. B., 343
Stanfield, J. A., 230
Stearns, G. M., 183
Steele, W. E., 1102
Steinberg, M., 907
Steinetz, E. W., 115, 1367
Stephenson, E. A., 1214, 1220, 1304
Stephenson, H. C., 1488
Sterrett, E., 55, 336, 339, 624, 962, 1182, 1183
Stevenson, D. P., 249, 250, 387
Stevenson, F. V., 666
Stevenson, H. M., 877
Stewart, J. S., 1047
Stewart, T. J., 498
Stick, J. C., 189
Still, J. E., 1490
Stillman, N., 61
Stinson, L. B., 767
Stockman, L. P., 683, 1282, 1351
Stoever, J. H., 1231
Stokes, J. C., 189, 356, 876
Stone, A. L., 189
Stoner, O. E., 767
Storch, H. H., 1525
Strain, F., 1364
Stratford, R. K., 500
Stratford, W. M., 1248
Strommenger, H., 285
Strong, W. O., 515
Stross, F. H., 549, 551
Stuart, A. H., 901
Stuart, R. W., 189, 767
Stuiken, E. J., 1100
Stull, D. R., 443
Subkow, P., 1296
Suen, T. J., 426
Surgenor, D. M., 401
Sutcliffe, R., 272
Suter, C. M., 402, 410, 417
Swain, J. F., 1383
Sweeney, W. J., 364, 879
Swenarud, S. A., 1427
Swingle, M. C., 1015
Swofford, P. J., 498
Synder, L. L., 189
Szasz, G. J., 260
Szayna, A., 1340
Szekely, G. E., 982
Szigeti, B., 1467

Taegel, E. A., 1131
Taliaferro, D. B., 1373
Taliaferro, N. L., 664
Tapp, P., 659, 673
Tarter, H. Y., 412, 413, 414
Tarner, J., 1217
Tate, B. E., 403
Tatterafield, P., 803
Tauben, A., 610
Taufen, H. F., 424
Taylor, F. B., 1081
Taylor, R. G., 767, 1426

Teichmann, C. F., 767
Teplitz, A. J., 610
Terrell, C. F. Jr., 189
Terry, L. F., 1087
Thacker, C. M., 896
Thayer, C. H., 125
Thayer, S., 63
Theobald, C. W., 632
Thiel, B. 991, 1330
Thigpen, T. T., 1426
Thom, W. T., 165
Thomas, C. L., 367
Thomas, C. L., 898, 1460
Thomas, E. D., 248
Thomas, R. M., 458, 1501
Thomas, W. D., 458
Thompson, A. P., 401
Thompson, A. W., 297
Thompson, E. O., 31, 312
Thompson, W. H., 99
Thoren, T. R., 189
Thorner, M. E., 1259
Thorp, C. E., 1371
Thurmond, C. D., 1480
Toby, E. M., 301
Tomisek, A. J., 398
Tomlinson, C. W., 751, 963, 967, 972
Tomlinson, L. E., 610
Tong, L. K. J., 535
Tooke, J. W., 264
Torrey, P. D., 345
Torrey, R. P., 354, 497
Trainer, R. P., 53
Trowbridge, R. M., 1134
Troyan, J. E., 255
Trusty, A. W., 107, 138, 460, 1238
Tucker, J. B., 498
Tucker, S. A., 1321
Tuckett, R. F., 1001
Tupper, K. F., 382
Turechek, G. F., 189, 767
Turnbull, D., 223, 388
Turner, F. E., 1041
Turner, L., 1159
Turner, N. C., 448
Turner, T. L., 335
Tuttle, R. B., 1242
Twort, J. M., 456, 457

Ullrich, W., 1317
Ungnade, H. E., 1474
Updike, F. H., 1
Uren, L. G., 606, 752, 971, 1426

Varley, E. R., 141
Vasilev, S. F., 90
Varney, F. M., 189
Veit, J., 303
Verheul, M. M., 189, 767
Vishnevskii, N. E., 372
Vries, T. de, 233

Wachter, A., 61
Wagner, C. R., 79, 80, 110, 193, 194, 195, 196, 197, 366, 615, 616
Wain, R. L., 1520
Waldo, P. G., 902
Walker, C. L., 767
Walker, J. P., 381
Wall, F. T., 1481
Wallace, J. S., 547
Walton, R. O., 973
Ward, J. L. Jr., 748, 1194
Warner, B. R., 522
Warthin, A. S., 1039
Waser, J., 523
Wash, G., 418
Washburn, G. D., 1222
Waterman, L. C., 767
Watkins, F. M., 1360
Watson, G. M., 510, 628
Watts, V. E., 1260
Wawzonek, S., 232
Wayne, T. B., 356, 498
Webber, M. W., 642
Weber, A. P., 201, 203, 204
Weber, L. J., 1426
Weil, B. H., 561
Weinrich, W., 561
Weisberger, C. A., 526
Weisman, R., 554
Welch, L. H., 296
Welker, R. M., 1256
Weller, J. M., 924, 927
Weltman, R. N., 288, 1124
Wenzke, H. H., 192
West, T. F., 152, 1365, 1506, 1507, 1510, 1518, 1519
Westoll, T. S., 1526
Weston, A. W., 410
Whalen, M. L., 405
Whann, J. P., 876
Wharton, J. B., 1390
Wheland, G. W., 521
Wherry, T. C., 1426
Whetstone, R. R., 214, 218, 219
White, E. R., 458, 547
White, W. H., 432
Whiteley, B. W., 1241, 1243, 1245, 1247, 1338, 1339, 1444, 1445, 1448, 1449, 1451, 1452, 1453, 1495
Whitmore, F. C., 254, 526, 631
Whitson, J., 1479
Wiese, H. K., 906
Wiggen, M., 1248
Wiggins, J. H., 189, 767
Wigglesworth, V. B., 1021
Wikholm, D. M., 292
Wild, F., 509
Wilde, E. D., 767
Wilds, A. L., 400
Wilhelm, C. J., 354
Williams, E. C., 1201, 1204, 1305
Williams, H. G., 903
Williams, H. O., 189, 876, 1426
Williams, M., 356
Williams, N., 166, 323, 340, 488, 600, 738, 742, 756, 762, 868, 1115, 1293, 1299
Williams, N. D., 1127
Williams, O. W., 610
Williams, W. L., 189
Willingham, C. E., 634
Willis, F., 189
Wilson, C. H., 661
Wilson, C. J., 1259
Wilson, C. O., 134
Wilson, C. W. Jr., 1386
Wilson, D. M., 275
Wilson, G. C., 1372
Wilson, G. J., 1511
Wilson, J. H., 498, 1095
Wilson, M. C., 610
Wilson, R. W., 876
Windle, G. S., 988
Wingen, N. van, 870
Winkelmann, S. A., 767
Winkle, M. van, 96
Winkler, C. A., 432
Winning, C., 1259
Winterburn, R., 929
Wirtel, A. F., 767
Wiseloge, E. F., 405
Wissow, 791
Withrow, L., 1370
Withrow, W. R., 771
Woerner, A., 369
Wood, S. E., 629
Woods, H. A., 1501
Woods, L. A., 397
Woodward, W. T., 813
Wolf, D. E., 259
Wood, J. H., 230
Wood-Mallock, J. C., 297
Worboys, W. J., 1022
Workman, A. R., 1454
Works, M. T., 1187, 1196
Wrenn, S. N., 254
Wright, D. L., 1259
Wright, K. A., 610
Wrightsman, G. G., 767
Wulff, J., 1259
Wyckoff, R. D., 861

Yeatman, C. A., 876
Yost, L., 1426
Yost, D. M., 1471
Yothers, M. A., 1266
Young, B. B., 498
Young, E. E., 511
Yule, J. S., 1501
Yust, H. R., 1016
Yust, V. E., 1492
Yuster, S. T., 874, 970, 1200, 1202, 1215

Zaba, J., 49, 51, 56, 176, 178, 185, 187, 350, 355, 491, 599, 743, 755, 758, 760, 763, 766, 872, 875, 1113, 1114, 1308
Zahm, H. V., 423
Zalkowsky, W. M., 1426
Zelinsky, N. D., 1311
Zieber, B., 284
Ziegler, W. T., 236
Zimmer, J. C., 902, 1259, 1501
Zinszer, R. H., 37
Zublin, J. A., 498
Zumeta, J., 876
Zweifel, H. C., 610

ABSTRACTS SUBJECT INDEX.

Numbers refer to Abstract Numbers. (P) denotes Abstract of Patent Specification.

Acetophenone, fluorine derivatives, 630
Acetylenes :
  alkyl and aryl, electrolytic reduction, 511
  disubstituted, hydrogenation, 239
Acetylenic Compounds, addition of hydrogen fluoride, 406
Acids :
  aliphatic from Californian petroleum, 418
  naphthenic from Californian petroleum, 419
  normal aliphatic, esters, 530
Acrylonitrile, manufacture and uses, 1263
Adsorption Data, correlation, 441
Air Cargoes, carriage of, 562
Alabama, Gilbertown discovery, 1070
Alaska :
  Northern, prospecting, 1272
  Point Borrow, 728, 931
Alberta :
  new wells, 685
  Pinhorn area gas-field, 718
  production, 32
  Ram River field, 1057
  South, Shell's new lease, 942
  Taber area, 14, 575, 724
Alcohols :
  catalytic dehydrogenation, 436
  dehydration, 254
  normal aliphatic, esters of, 530
  trihydric, aryl ethers of, (P) 1368
Aliphatic Hydrocarbon Derivatives, availability, 1514
Alkathene, properties, 553
3'-Alkyl-1 : 2-*cyclo*pentenophenanthrenes, synthesis, 537
Alkylation :
  combination with isomerization unit, 81
  hydrogen fluoride, 770
  processes, (P) 371, (P) 882, (P) 1230, (P) 1436
  propane refrigeration units, 987
Alkylation Plant, hydrogen fluoride, 504, 769
Alkyl Benzenes, identification, 801
Alkyl Phenols, *meta*-substituted, separation from mixtures of *meta*- and *para*-substituted phenols, (P) 1368
Alkynes, addition of hydrogen fluoride to, 229
Aluminium Bromide, solubility in *n*-butane, 1480
American Petroleum Institute, papers presented before, 188
Amino Alcohols, condensation with benzene, 417
Anthracenes, phenylated, fluorescence, 1485
Arkansas :
  discoveries, 696
  Dorcheat Pool, dual completion, 1197
Arylethylenes, ultra-violet absorption spectra, 783
Asphalt :
  coating, (P) 1502
  modifiers, 124
  non-photosensitive, (P) 903
  oxidized, softening of, 550
  preparation, (P) 1260
  road, durability, 551
  surface consistency of, 291
Automobiles, electrical equipment of, 1522
Aviation Fuels :
  filter freezing temperature, 280
  isomerization of *n*-butane, 111
  100-octane, post-war requirements, 1354
  plant modifications for manufacture of, 113
  production of hydrocarbons for, 96, 110
  refinery for production, 376, 996, 1123

Bahrein Island, refinery capacity increase, 928
Bauxite, uses in refining, 885, 1326, 1327
Benzene :
  catalytic hydrogenation, 421
  heat capacity, 233
  liquid, action of ultra-violet light on, 1467
  metalation, 515
  substituted, dipole moments and resonance effects, 225
  thermodynamics, 677
Benzene-d_6, heat capacity, 236
o-Benzhydrylphenones, *cyclo*dehydration, 399
Benzole Recovery, effect of hydrocarbon duty on, 1527
o-Benzylphenones, cyclization, 533
Biphenylene, structure, 523
Bitumen :
  acids in Russian, 1361
  waterproofing, (P) 1502
Bitumen Emulsions, hydrogen-ion concentration, 539
  preparation, (P) 1348
Book Dealers, secondhand in Canada and U.S.A., 1382
Brazil, exploration, 586
Bubble formation, 1126
Butadiene :
  Houdry process applied to manufacture, 125

Butadiene—*cont.*
preparation, 299
production, 302, 808
stability, 906
iso-Butane :
heat capacity and hindered rotation, 384
reaction of hydrogen atoms with, 432
meso- and *dl*-Disubstituted Butanes, Raman spectra, 424
n-Butane :
362
heat capacity and hindered rotation, 384
mercury photosensitized decomposition, 428
solubility of aluminium bromide in, 1480
surface tension, 267
volumetric behaviour, 1459
n-Butane–Water System, equilibrium data, 1463
Butene-1, mass spectrum, 387
cis-2-Butene, thermodynamic properties, 1486
3-Butenoic Acid in Hexane, hydrogen bromide addition, 411
*iso*Butylene Copolymers, structure, 908
Butylene Glycol, preparation, 150

Cables :
insulating oils for, 293
plastic for, 1268
California :
Aliso Canyon Field, 1128
Antelope Hills Field, 813
Del Valle Field, 1128
developments, 1141
drilling, 162, 1282
East Coalinga Extension field, 564
exploration, 1397
Greely Field, 1
Huntington Beach Field, 563
need for discoveries, 169, 1282
Newhall-potrero Field, 1128
Oak Canyon Field, 1128
oilfield operations, 1942
production, 156, 683, 929
Rincon Field, 3
Rio Bravo Field, 2
Canada :
Athabaska area, 582, 825
Del Bonita well, 574
discoveries, 1398
Eastern, oil possibilities, 1174
Fort Norman production, 322, 481
Gaspe well, 1164
Mackenzie River basin, 851
Moose River basin, 720
Norman Wells field, geology and development, 1047
Northern, development possibilities, 1177
oil-wells in, 160
Peace River gas output, 13
Prince Edward Island wildcat, 576
production, 170, 332, 479, 567, 932
Canada—*cont.*
refineries in, 88, 507
second deepest wildcat, 1051
synthetic rubber programme, 463
Taber Field, 583, 587, 593
Turner Valley, 475, 480, 579, 581, 594, 719, 854, 1089
Vermilion field, 15, 18, 164a, 584, 719, 858
West, oil search, 321, 1149
wildcat, deep, 328
Carbon :
thermal and electrical conductivity, 1125
trivalent, 405
Carbon Black, 912
density, 300
recent research, 914
properties of rubbers using, 1362
Carbon Dioxide, estimation in air samples, 1489
Carbon Disulphide, preparation, 896
Castor Oil, Nigerian, use as lubricant, 1359
Catalysts :
bead, 137
boron trifluoride, 247
hydrogen fluoride, 208
magnetic susceptibility, 633
palladium- and platinum-polyvinyl alcohol, 396
Raney nickel, 259
use in industry, 138
Centrifugal Separation, 202
Chemical Industry, coal and oil as basic materials for, 919
China :
exploration, 580
geology, 924
Kansu Field, 849
Szechuan Province, 927
Chlorinated Naphthalenes and Diphenyls, precautions in use, 904, 905
Chlornitroparaffins, dielectric constants, 251
Chrysene Derivatives :
preparation by Robinson-Mannich synthesis, 400
ultra-violet absorption spectra, 782
Clinograph, gyroscopic, 172
Coal :
gasification of, 654
carbon and hydrogen in, 276
hydrogenation, 1525
liquid fuels and organic chemicals from, 1019
low-temperature distillation, 1524
oil from, 154, 653
and smokeless fuel from, 305
synthetic lubricants from, 306
Coal Gas :
determination of benzene and toluene in, natural, in West Virginia, 1119, 1491
Cold Rolling Mills, oils in, 466
Colloidal Solutions, rheological properties, 288

Colombia :
Barco field, 1163
completions, 477
drilling, 1052
exploration, 590
new field, 1150
oil-fields, 161
production, 946, 1086, 1411
Tibu area, 1406
wildcats, 469, 723, 844, 943
Combustion, economics of, 622
Core Oils, preparation, 136
Coronene, attempted synthesis, 230
Cracking :
catalytic, effect on post-war supply of fuels, 880, 1429
catalytic, 367, 614
*cyclo*version process, 1315
fluid catalytic process, 78, 879
Houdry catalytic unit, 77
process, 1120
Latin American Crude Oils, 1223, 1224, 1432
processes, (P) 369, (P) 500, (P) 881, (P) 986, (P) 1229, (P) 1316, (P) 1433
suspensoid catalytic, 1227
T.C.C. processing, 368
technology, 79, 80, 193, 194, 195, 196, 197, 366, 615, 616
Creosote-Pitch Fuel, development, 155
Cresols, separation, 467
Crude Petroleum :
aviation gasoline content evaluation, 66
Colon (Venezuela), cracking of, 1432
containing dissolved gases, surface tension of, 53
disposal of surplus, 1160
Eastern Venezuela, cracking of, 1223
hydrocarbons in lighter fractions of some Russian, 1311
influence of temperature on yield, 1312
Ishimb, variability of, 1313
New Mexico, analysis of, 65
sour, refining of, 199
Turner Valley, aromatics in, 431
examination of, 427
West Texas, refining of, 192
Western Venezuela, cracking of, 1224
Cumene :
density and refractive index, 255
preparation, 780
Cyclization Reactions, mechanism of, 252
*cyclo*Dehydration, aromatic, 786, 791

Dakota, South :
drilling, 308, 1050
stratigraphy near Rapid City, 1045
test wells, 937
D.D.T. Synthetic Insecticide, 554, 1017, 1018, 1365, 1507, 1516, 1519, 1520
Decahydronaphthalene, hydrogenation-cracking of, 1468
Decahydro- and Tetrahydro-naphthalenediols, synthesis, 422
Decyltrimethylammonium Decanesulphonate, electrolytic properties, 414
Dehydrogenation, catalytic, 781
Dermatitis, 1023
Detergent, synthetic, manufacture, etc, 1509
1 : 2 : 3 : 4-Dibenzphenanthrone, synthesis, 518
1 : 2 : 3 : 4-Dibenzphenanthrene, preparation, 532
p-Dibutylbenzenes, isomeric, preparation, 529
Dibromoethylenes, gaseous, equilibrium, 519
Di*cyclo*pentadiene, vapour pressure, 238
Dielectrics, internal discharges in, 1503
Diesel Fuels :
additives for, (P) 1255
desulphurization, 1319
ignition accelerators, 1372
post-war outlook, 1497
preparation, (P) 899
removal of oil-insoluble impurities, (P) 1255
2 : 2-Dimethylbutane, P-V-T relations, 628
1 : 1-Dimethyl*cyclo*pentane, preparation, 262
Dimedone (Dimethyldihydroresorcinol), catalytic hydrogenation, 262
α, ω-Dimercaptans, properties, 524
Dimethylacrylic acid, reaction with *m*-xylene, 386
Diolefins :
conjugated, 1478
synthesis from allylic chlorides, 1477
m-Diphenylbenzene, halogenation, 237
Dipmeter, S. P., 36
Disinfectants, halogenated hydroxydiphenyl methanes, 644
Dispersions :
bituminous base, (P) 903
oil and water, separation, (P) 767
transparent water-in-oil, oleopathic hydromicelle, 103
Dominican Republic, drilling, 829, 1417
Drilling :
annular space between casing and wall, volume determination, (P) 876
blow-out control, 865, 1187, 1196
casing bridge, removal from gas-well under pressure, 1195
design, 732
failure, causes and control, 595
scraping, 1192
sealing method, (P) 1426
selection charts, 1181
caving and sliding prevention, (P) 1426
cementing, 596, 734, (P) 876, 956
core contamination prevention, 1193
orientation, geometrical, 1296
coring with reverse circulation, 42, 1188
costs, 598, 975
deep, 41
water method, 957, 1190

Drilling—*cont.*
deepest well, 959, 962, 1108, 1109
depth measurements, 40
directional, (P) 189, (P) 498, 740
elements of, 869
exploratory, classification of terms, 1186
fluid losses, 867
formation sealing, (P) 767
gas detection, (P) 876
gravelling method, (P) 1426
Heidelberg field practice, 1293
hole deepening, 731
horizontal, 338, 487
interpretation of cable-tool drilling logs, 1383
methods, (P) 767
mud acid treatment, 337
mud-conditioning in Rocky Mountains, 488
new methods in South Arkansas, 1111
problems of steeply dipping formations, 1295
radioactivity logging, 1185
reverse circulation, 733, 737, 866, 961
rotary, in Rocky Mountains, 738
sealing off porous formations, (P) 1426
tool orientating, (P) 189, (P) 498
tools, stuck, freeing of, 171, (P) 498
triple completions, 736
war-time conditions, 173
well-bore survey, (P) 876
well-logging, (P) 189, (P) 356, (P) 498, (P) 610, (P) 767, (P) 876, 1298, (P) 1426
Gamm ray, 597
well-surveying, (P) 1426
wild well control, 735
workers wage analysis, 812
Drilling Equipment:
a.c. rigs, power for, 174
ball-thrust bearing, (P) 1426
barge, floating, (P) 610
bit protectors, (P) 189
bits, (P) 189, (P) 498, (P) 610, (P) 767, (P) 876, (P) 1426
bridging plug, (P) 876
caliper, electric, (P) 876
casing string design, 1194, (P) 1426
world's deepest, 1183
welded, 739
well, (P) 498
catheads, mounting for, (P) 189
cement retainer, (P) 610
cementing tools, (P) 189, (P) 498
collar, composite, (P) 189
combination-rod safety joint, (P) 356
coring devices, (P) 189, (P) 356, (P) 876, (P) 1426
cutter, drill, (P) 498
deep well, (P) 1426
deflecting tool, (P) 876
derricks, (P) 189, (P) 356, (P) 498, (P) 610, (P) 767, (P) 876, (P) 1426
development, 730
deviation detector, (P) 189, (P) 610
draw-works,(P) 189, (P) 876, (P) 1426
Drilling Equipment—*cont.*
fishing tool, (P) 498, (P) 1426
formation testers, valve for, (P) 356
gun perforators, (P) 189, (P) 610, (P) 767, (P) 1426
hook, (P) 356
hose-coupling, (P) 189
hydraulic, (P) 876
jar, (P) 876
kelly-rod and drive bushing, (P) 610
lateral bore drilling apparatus, (P) 498
leak detector, (P) 356
liner hanger, (P) 610, (P) 876
milling cutters, reconditioning, 339
oil saver and rod stripper, (P) 876
pipe cutter, (P) 1426
measurer, (P) 767
protectors, (P) 189, (P) 498, (P) 1426
tongs, (P) 189
threader, (P) 767
portable, 489, 960
pumps, flush, (P) 356
radiographic and magnetic inspection, 1297
rate-of-penetration indicators, (P) 189
reamer, (P) 189
rotary, (P) 189, (P) 498
setting tool, (P) 876
side-wall corer, (P) 498
swivel shaft, wear and tear on, 1182
thread protector, (P) 189
trip tube, (P) 876
tubing anchor, (P) 356, (P) 1426
make-up device, (P) 356
turbine, (P) 767
well surveying apparatus, (P) 610, (P) 767, (P) 1426
valves, steam, (P) 189
walking beam rockers, reconditioning, 336
whipstock, (P) 356, (P) 610, (P) 767
wire lines, reeling unit for, 958
Drilling Fluids, (P) 189, (P) 498, (P) 610, (P) 1426
detection of salt in, (P) 189
shallow well completion, 1189
loss prevention, (P) 767
non-aqueous, (P) 1426
treatment, (P) 356, (P) 498
water-base and oil-base, 1110
Drilling Muds, (P) 189, (P) 767
colloidal, for heaving shale, 864, 1191
conditioning, 868
ejection control, (P) 189
salt water, (P) 1426
screen for, (P) 189
treatment, (P) 610, (P) 876, (P) 1426
turbine for, (P) 1426
Drums, rust-proof lining, 61
Dry Cleaning Solvents, 649
Drying Oils, preparation, 807
Dusts, inert, action on insects, 1021, 1025

Ecuador:
developments, 826
production, 816, 1056

Edible Fats, anti-oxidants in, 1498, 1499
Electron Tube, 635
Emulsions :
  asphalt, (P) 459
  bituminous, preparation, (P) 903, (P) 1260
  mineral oil, dehydration, (P) 189
  petroleum, breaking, (P) 189, (P) 498, (P) 610, (P) 767, (P) 876, (P) 1426
  treatment, (P) 767
  water-in-oil, resolution (P) 893a
Engines :
  aircraft, intake systems for, 652
  diesel, cold-starting tests, 559
    development trends, 639
    exhaust gases composition, 651
    fuel consumption, 1030
    injection nozzles, 1031
    influence of ozone on performance, 1371
  gas-turbine, 1271
  internal combustion, causes and effects of roughness in, 1370
    oxidation of fuels in induction systems, 1369
  military, dust problems, 560
  motion analysis by high speed photography, 1029
  oil-testing, 1253
  preventive maintenance and inspection, 558
Entropy, use in diesel engine applications, 153
Equation of State, gases at high pressure, 223
Ethane :
  heat capacity, 383
  heat of solution, 269
Ethylbenzene, fluorine derivatives, 630
Ethylene, use in wheat storage, 650
cis- and *trans- cis*-Eugenol, toxity to flies, 1518
Exploratory Wells, classification, 1152

Fatty Acids, normal saturated, refractive index and densities, 246
Fibrous Material, asphalt saturant for, (P) 552
Filtration, 621
Finance, oil companies, 1934–1942, 1374
Fire Prevention :
  fireproofing of wood, 1456
  training of refinery plant personnel, 1228
Fire Risks, industrial, 1455
Fischer-Tropsch Process, 538, 1445, 1448
Fischer-Tropsch Water-Gas Synthesis, composition of paraffin waxes from, 112
Flooring Composition, preparation, (P) 1260
Florida :
  Eastern, new well, 470
  new well, 936
  North, exploration, 566
  South-Western, oil discovery, 314, 697
Fluidization, principles and application, 1250
Fluorine, use in organic synthesis, 1251
Fluorobenzene, heat capacity of, 233
Formic Acid, catalytic reduction by, 435
Fractionation Processes, application of unit operations to, 1002
Freons, 1251
Friction, external, between sliding solids, 118
Fractional Phenomena, 287
Friedel-Crafts Reaction, 234, 258
Fuel Feed, vapour-lock elimination, 556
Furnace Oils, stability, 284
Furoic Acid, reaction with tetralin, 241

Gas Generator, portable, 272
Gases :
  heat capacity equations, 240
  hydrocarbon, analysis by adsorption fractionation, 448
    heat capacities, 443
  spectrometric analysis, 1493
  vertical migration of, 1106
Gas Oils :
  future rôle of, 1357
Gasoline :
  analysis of, 634
  catalytic, octane number variation, 365
  desulphurization, 1319
  high-sulphur, refining, 372
  octane-number improvement by isomerization, 1431
  straight-run, catalytic reforming, 76
  Sunray process, 365
  synthesis, 1003
    by Fisher-Tropsch process, 538
Gas Wells, drowning and revival, 970
Geochemical well logging, 1097
Geophysical Survey :
  deep correlation reflections, 1094
  delta-t velocities, errors, 1101
  depth/lithology/seismic wave velocity, relation in Tertiary sandstone and shales, 1099
  direct-current prospecting, 1104
  earth-resistivity measurements, empirical interpretation of, 1422
  electrical prospecting method, 1180
  fluorescent surface surveys, 335, 670
  future of, 1091
  gravity/structure relationship in Northern Appalachian area, 1096
  Kansas, Oklahoma, and Missouri zinc and lead district, 661
  measurement problems, use of gamma-ray logs in, 1107
  natural potential survey, 39
  off-shore, 1423
  phase shift meter, direct-reading, 1098
  progress, 861, 862
  prospecting effectiveness, 1105
  method, (P) 1426
  reflection seismograph performance, 954
  refraction prospecting, 1103

Geophysical Survey—*cont.*
sedimentary rocks, natural potentials in, 38
seismic receptors, 1092
velocities, San Joaquim Valley, California, 1100
weathering problems, adaption of refraction theory, 1092a
seismograph shooting, accident prevention, 863
subsurface correlation, 953
t-delta-t velocity determination, 1102
viscosity of shale, 1093
Wellington Field, Colorado, 1095
well-logging, electrode spacing in, 37
Georgia :
drilling, 482
south-east, exploration, 566
Germany :
oil requirements, 938
oil shortage, 1288
Graphite, thermal and electrical conductivity, 1125
Grignard Reactions, course and mechanism, 1483
Gulf Coast, developments, 1130
Louisiana, exploration, 687
reflection seismograph performance, 954
south-eastern, geological developments, 948
Texas, discoveries, 693

Halogenation, aromatic, kinetics of, 433, 434
Hand Coring, orientated, 859
Hazardous Areas, installation of electric plant in, 1335
Heating Services, domestic, 1523
Helium, 140
Heptaldehyde, pryolysis, 426
bicyclo(2 : 2 : 1)Heptane, preparation, 1460
bicyclo(2 : 2 : 1)-2-Heptene, preparation, 1460
n-Heptane, surface tension, 267
Hexa-aryl-ethanes, dissociation of, 227, 534, 1479
1 : 1 : 3 : 3 : 5 : 5-Hexamethyl-*cyclo*hexatriol-2 : 4 : 6, rearrangement to hexamethylbenzene, 235
Hexanes, heats of vaporization, 385
*cyclo*Hexane :
hydrogenation-cracking of, 233, 1468
thermal data, 260, 531
5-Hexanoic Acid in Hexane, hydrogen bromide addition, 411
*cyclo*Hexanols, preparation, 1474
Hungary, production, 731, 1063
Hydrocarbon Gases :
centrifugal compression of, 1239
cracked, "Grain" alcohol from, 555
viscosity, 1341
Hydrocarbons :
acetylenic, formaldehyde derivatives, 784
Hydrocarbons—*cont.*
carcinogenic, and synthetic oestrogens, 1466
effect of oxygen on fluorescence of, 528
solubility, of water in, 1249
low-boiling, high-pressure absorption, 440
olefin, synthesis, 404
paraffin, catalytic isomerization, 792
paraffin, correlation of physical properties, 1458
petroleum, 102
P-V-T relationship, 1324
thermal decomposition, 407
unsaturated, polarographic study of reduction of, 232
volatile, vapour-pressure chart, 101
Hydrofluoric Acid, anhydrous, handling, 143
Hydrogenation :
catalytic, mechanism, 439
stereochemistry of, 214, 215, 216, 217, 218, 219, 220
coal, catalysis of liquid-phase stage, 1434
processes, 370, (P) 1435
Hydrogen-Bond Theory, current trends, 1464
Hydrogen Chloride, anhydrous, manufacture, 131
Hydrogen Fluoride :
addition to halo-olefins, 513
use as condensing agent, 512

Ignition Temperature Test, 107
Illinois :
Lower Ordovician and Cambrian oil possibilities, 1145
Plymouth pool repressuring systems, 1307
undiscovered reserves, 852
water-flooding of oil-sands, 969
wildcats, 692
Immersion Heaters, glass, 1490
Immiscible Liquid Systems, application of Gibbs phase rule, 893
Indene, vapour pressure, 238
India, drilling problems, 955
Indiana, new fields, 700
Insecticides, 152, 292, 554, 645, 646, 647, 803, 804, 805, 915, 1016, 1017, 1018, 1021, 1025, 1261, 1265, 1266, 1267, 1365, 1506, 1507, 1510, 1516, 1518, 1518, 1520
tests on synthetic organic compounds, 1015
Insulating Oils :
maintenance, 296
manufacture and testing, 297
preparation, (P) 918
relation to circuit-breaker failures, 295
Iowa, Forest City Basin, 695

Kansas :
discoveries, 694
Forest City Basin, 695

Kentucky, Western, wildcats, 699
Kerosine :
applications and qualities, 460
determination of deposit on citrus leaves, 1014
Ketones :
anhydrous, preparation, 1515
preparation, 1476
reaction of ketone with, 226
Kimmeridge Shale Tar :
diesel oils from, 811
hydrogenation, 810
Kuwait, geophysical survey, 952

Laboratory Equipment :
low-hold-up column, 1006
timing clock, 1007
Lake Erie, gas well, 380
Lighter Fuels, properties, 1367
Linear Condensation Polymers, molecular-weight distribution, 224
Linseed Oil, drying of, 1024
Liquefied Petroleum Gases :
demand, 613
developments, 71
storage, 69
Liquids :
film formation by, 265
pure, viscosity, 999, 1000
Livestock Sprays, effect of base oils on cattle, 1264
Louisiana :
Frio discovery, Vinton field, 329
North, discoveries, 696
Lovibond and Saybolt Chromometers, correlation of colour measurements, 449
Lubricants :
additives for, (P) 1259, (P) 1501
aircraft, evaluation of ring-sticking properties, 1492
anti-ring-sticking, (P) 358
castor oil, 1359
emulsion, 285
examination of, 642
extreme pressure, (P) 458
graphite, 117
Pennsylvanian, optical rotation of, 1461
preparation, (P) 458, (P) 547, (P) 902, (P) 1013, (P) 1259, (P) 1501
press tools and wire drawing, 901
reclamation, (P) 1501
stabilizers, (P) 1259
stopcock greases, 544
synthetic, preparation, 1347
vegetable oil, 121
Lubricating Oils :
additives, (P) 458, (P) 547, (P) 902. (P) 1360
asphaltization tests, 636
classification, 641
contamination, deterioration and decomposition, 900
conversion from asphaltic hydrocarbons, (P) 1360
corrosion tester, 543
Lubricating Oils—*cont.*
fluorescence, 104
heavy duty, 1127, 1256
oxidation-corrosion test, 109, 290
physical properties, 119
preparation, (P) 458, (P) 902
pour-point stability, 120
purification, (P) 453
Quaker State plant for, 997
reclamation, 455
rock-drill, 123
synthetic, 546
testing, (P) 1348
treated, pour-point stability, 116
Lubrication :
boundary, 1012
friction measurements, use of radioactive indicators, 1258
heat effects in lubricating films, 1257
industrial problems, 115
oil aeration, 1358
engine, 122
oxidation in relation to, 289
"oiliness" and surface roughness, 286
stick-slip process, 545

Magnesium Carbide, preparation, 408
Mass Spectra :
butene-1, 387
n-propyl chloride, 249
t-butyl chloride, 249
*iso*butylene, 250
propane, 250
propylene, 250
Mass Spectrometry, analysis by, 447, 540, 1008, 1009
Mercaptan Sulphur, estimation of, 279
Methallyl Chloride, sulphonation, 402
Methane, conversion to hydrogen and carbon monoxide, 626
Methane–Carbon Dioxide System, phase equilibria, 891
Methyl Butadienes, dipole moments, 785
2-Methyl-buten-1-yne-3, addition of triphenylmethyl, 401
Methyl Furoate, reaction with benzene and chlorobenzene, 222
Methyl*cyclo*hexane, heat capacity of, 233
Methyl *iso*Propenyl Ketone, physical constants, 228
1-Methylnaphthalene, synthesis, 393
α-Methylnaphthalene, preparation from tar-oil, 263
3-Methylphenanthrene, acetylation and succinoylation, 514
Mexico :
northern, discovery, 569
petroleum industry status, 309
Poza Rica field, 939
production, 333, 484, 833, 835
refineries in, 88
Tampico area, 846
Michigan :
developments, 1138
production, 684
traverse rocks, Thunder Bay region, 1039

"Microdoser," 446
Middle East :
American holdings in, 941
U.S. development scheme, 928
Mineral Aggregate, coating of, 548
Mississippi :
discoveries, 697, 1070
exploration, 1054
Heidelberg Field drilling practice, 1293
Missouri, Forest City Basin, 695
Mixtures :
benzene-carbon tetrachloride, thermodynamic functions, 629
binary, chart for distillation of, 1467
hydrocarbon, C_4 volume correction factors, 1487
hydrocarbon, stage separation of, 1337
oil, rheological properties, 288
Molecules, Long-Chain, viscosity, 245
Montana :
exploration and development, 1083
Gage field, 1277
Montan Wax, 304
Motor Fuels :
additives, (P) 898, (P) 1254, (P) 1496
analytical data, fuels sold in U.S., 1375
anti-knock, (P) 454, (P) 542, (P) 898, (P) 1356, (P) 1496
combustible gases as substitute, 1345
continuous atuomatic lead blender, 1355
gasogenes, 283, 499
high octane, production, 1318
inflammability control, (P) 898
100 octane, post-war requirements, 1354
specific heat in the gaseous state, 1353
post-war problems, 1010
preparation, (P) 454, (P) 542, (P) 898, (P) 1011, (P) 1254, (P) 1356, (P) 1496
safety, (P) 454, (P) 1356
search for synthetic, 1252
supply and demand, 1352

Naphthalene :
t-butyl homologues, 631
dialkylation, 398
vapour-phase oxidation, catalyst for, 253
Naphthalene Derivatives, sulphonation, 800
2 : 7-Naphthalene-dialdehyde, synthesis, 230
Naphthenates, uses, 149
Natural Gas :
analysis, 72
catalytic dehydrogenation, 1228
dehydration, 70, 342
enthalpy-entropy charts for, 1424
high-pressure, measurement, 67
hydrate formation in, 1425
Oriskany, 1428
post-war supply and demand, 1225
storage, 768
utilization, 1314
Natural Gas-Crude Oil Systems, vapour-liquid equilibria, 343
Natural Gasoline, use as gas enricher, 68
Nebraska, Forest City Basin, 695
Neophyl Chloride, reactions, 526
New Mexico :
developments, 1132
Maljamar Pool extension, 680
New Zealand :
exploratory drilling, 474
production, 592
Nicaragua, wildcat, 817
3 : 2-Nicotyrine, preparation, 292
Nitro Compounds, aliphatic, acid strengths, 521
Nitroethane :
dielectric constants, 251
preparation, 509
Nitroparaffins :
ionization constants, 388
properties and uses, 281
recent developments, 282
toxicity to California Red Scale, 1016
Nitrotriols, preparation, 409
Nomographs :
Dittus-Boelter Equation, 213
k in Smoker's Equation for binary distillates, 105
rate-of-flow in natural-gas pipe-lines, 611
tangent intersection of pipe-bend, 91
Nonane and Decane α, ω-Dicarboxylic Acids, preparation, 525
Nova Scotia, test drilling, 845

*iso*Octane, preparation, (P) 898
Octyltrimethylammonium Octanesulphonate, electrolytic properties, 414
Ohio, discoveries, 698
Oil-Fields :
development, (P) 189
exploitation, 606
Oklahoma :
Anadarko Basin, 818
developments, 1135
discoveries, 689, 936
water-flooding projects in, 1373
West Edmond Wells, 741, 1399, 1412
Olefins :
aryl, restricted rotation in, 632
phenylated, addition of metals to, 391
reaction with sulphur dioxide, 794
Organic Compounds :
micro-analysis, 445
silver vanadate in combustion analysis of, 277
Organo-Silicon Compounds, 1512

Paints, coal tar, 1026
Paraffin-Chain Quaternary Ammonium Salts, electrolytic properties, 413
n-Paraffin Solutions, viscosity, 268
Paving Mixtures :
preparation, (P) 552
testing, 549
Peat Fuel, utilization of, 158

Peat Wax, 304
Pennsylvania, future oil pools, 1274
Pentacene Ring System, synthesis, 527
*cyclo*Pentadiene, use in synthesis of sterol-like compounds, 425
*cyclo*Pentane :
  preparation, 264
  thermal data, 395
*iso*Pentane, heat capacity and entropy, 257
n-Pentane, viscosity, 442
cis- and *trans*-2-Pentene, co-ordination of silver ions with, 389
4-Pentenoic Acid in Hexane, hydrogen bromide addition, 411
Perbenzoic Acid, oxidation of an ethylene derivative by, 1472
Persian Gulf, reserves, 842
Peru :
  aerial survey, 1162
  drilling, 944, 1166
  production, 478, 1076
Petroleum :
  analysis by radiation, 1005
  packed, shipment of, 878, 985
Petroleum Distillates, nitrogen compounds in, 248
Petroleum Ether, desulphurization, 1319
Petroleum Geology :
  Alberta, Moose Mountain, 657
  Anse La Butte dome, Louisiana, 1390
  California, Western Santa Ynez Mountains, 655
  Carolina Bays, 1385
  China, 924, 927
  core-testing, 659
  Cretaceous system, 668, 669, 670, 671
  Dakota Basin, 663
  economic mineralogy, 1376
  palæontology, 1376
  Florida, 578, 857
  folded beds, calculation of true thickness, 1142
  Franciscan-Knoxville problem, 664
  Georgia, south, 857
  ground water in Houstan district, 1388
  Gulf Coast, erosion of salt stock, 660
  Haplolepidæ, 1526
  Illinois, Lower Ordovician and Cambrian oil possibilities, 1145
  Kansas, Ellis County, 662
  Louisiana, Jennings Field, 1389
  Mexico, eastern, Upper Jurassic landmass, 1036
  Michigan, Thunder Bay region, 1039
  New Mexico, Devonian fauna, 666
  North Texas, Lower Cretaceous Fredericksburg-Washita boundary, 1387
  oil reservoir classification, 667
  Palæozoic shales, radioactivity and organic content, 951
  Peace Creek Field, 471
  Rocky Mountain region, structural conditions for oil accumulation, 1034
  Sakhalin Island, 1405
Petroleum Geology—*cont.*
  salt dome formation, mechanics of, 658
  salt domes, 30
  Siliceous Dockum conglomerates, origin, 1042
  stratigraphic type fields, classification of reservoir traps, 1038
  units, measurement, 665
  structure diorama, 1291
  Tertiary sediments, Morgan Hill, California, 1044
  Texas, Bowers Field, Montague County, 656
  Central, Jackson County, 168
  Seguin formation, 1041
  Wasson Field geology, 1035
  Michigan, Thunder Bay region, 1039
  Tuscaloosa formation, Gulf Coast plain, 1040
  Upper Desmoinesian and Lower Missourian rocks in Oklahoma and Kansas, 1043
  Wyoming, Big Horn Basin, 165
Petroleum Industry, war-time changes in, 1380
Petroleum Oils, constitution, 895, 1004
Petroleum Products :
  butane and pentane in, 106
  use in aircraft, 557
β-substituted Phenethylamines, preparation, 410
Phenols, substituted, preparation, 917
1-Phenyl-2-Alkyl-*cyclo*Propanes, action of sulphuric acid on, 1484
Phenyl Group, 1 : 3-rearrangement, 1470
9-Phenyl-dodecahydrophenanthrene-10-carboxylic Acid, Friedal-Crafts reactions, 517
Pigment Suspensions, rheological properties, 288
Pipe-Lines :
  cathodic protection, 1329
  corrosion, 359
  bacterial, 191
  control, 64, 983
  effects of alternating current, 64
  inhibitor, 360
  fluid flow in, 625
  gas, pressure drop calculation, 75
  Magnolia, anti-corrosion measures, 877
  mechanical couplings for, 982
  natural gas, flow equations for, 62
  war emergency, post-war conversion to natural gas, 1427
Piperylene, geometric isomers, 420
Pipes :
  energy and momentum correction factors for flow in, 382
  high pressure, internal insulation, 358
  incompressible *versus* compressible flow in, 1226
  Saran plastic, 126
Pirylene, constitution, 243, 244
Plastics :
  alkyl, physical properties, 1364
  analytical aspects, 1269
  preparation from petroleum, 136

Plastics—*cont.*
raw materials for, 1022
uses for insulation, 303
Plastics Industry, developments, 1366, 1504
Polyethylene, use as cable insulator, 1268
Poly*iso*butylenes, molecular weights and intrinsic viscosities, 256
Poly*iso*propylbenzenes, 39
acetylation, 799
bromo derivatives, 798
carboxylic acids, 798
chlorosulphonation, 797
nitration, 796
nitriles, 798
preparation and properties, 394
Polyvinyl Chloride, rheological properties, 1469
Polymerization Reactions, kinetics, 415, 416, 1482
Polymerization, chemistry of, 1346
gaseous olefin hydrocarbons, 1317
remote control codimer unit, 617
Polystyrene Fractions, osmotic and viscosity measurements, 1342
Polyvinyl Alcohol:
chemistry and applications, 909
end-group structure, 536
*iso*Prene, Copolymers, structure, 908
Prince Edward Island, drilling, 472
Production:
abandoned wells, sealing off, 59
air injection, 1112
cased-off oil location, 765
casing perforations, effect on productivity, 44
clogging prevention, (P) 1426
completions, dual, 604, 1197
triple-zone, 181
method, (P) 498
conductor pipe spacing, 180
co-operative engineering committees, 602
core examination, 493
corrosion in gas and condensate wells, 1117
cycling operations, 492
distillate well problems, 55
effect of pre-perforated liners on, 966
electrolytic corrosion, 748
flow calculation, 349, 978, (P) 1426
flowing wells, 1210
fractionation and other vaporization problems, application of unit problems, to, 1198
Frio formation, analysis of water from, 1302
gas injection, 1299
life, 757, 1300
pilot controlled, 973
gas-sands, exclusion of water from, 1201
gravel packing, 744
gravity drainage, 341
hydrocarbon recovery, (P) 1426
Production—*cont.*
interstitial heterogeneity of sand reservoirs, statistical approach to, 1303
material-balance equations, 753, 964
micro-organisms in water, 673
multi-zone, 752
oil reservoir calculations, 976
well capacities, 45
oil-field, remedial work, 47
orifice buttons, 1310
paraffin removal, 871, 1308
pipe recovery, (P) 876
plugging, plastic, 601
selective, 1215
polished-rod acceleration, correlation with well-load, 605
porosity determination, (P) 876, 1206
of solids, measurement, (P) 189
pressure maintenance, (P) 767, 759, 870
pumping, deep sucker-rod, 1116
hydraulic, 1113, 1118
hydraulic, paraffin removal in, 1114
installations, prime movers for, 599
need for counterbalancing, 178
problems, 761, 763, 766, 872
units, installation calculation, 743
units, peak-power requirements, 747
pump performance determination, 58
rapid extraction, 50
re-designing, 762
repressuring, 344, 1307, 1199
reservoir control, co-operative, 496
efficiency, 745, 749
performance analysis, 46, 608, 672, 980, 1207, 1217
physical properties, 977
review of, 742
rôle of capillarity in, 175
salt-water disposal, 52, 1115, 1306
disposal flow chart for, 968
saturation determination, 874
secondary recovery, 345, 348, 352, 353, 354, 494, 495, 497, 603, 609, 746, 754, 974, 1211
rôle of connate water in, 1212
selective plugging, 1202
shallow sands, 163
siliceous strata, increases production from, (P) 356
Smackover limestone, reservoir behaviour, 1301
sucker-rod failure, 51
fatigue, 49
string proportions, 1309
torque analysis, 875
tubing perforation, 490
use of abandoned wells as induction centres, 873
water-coning, 48, 965
control, (P) 189, 965, 1214
entry location, (P) 498
flooding, 57, 750, 764, 969, 979
injection, 346, 351
sands, plugging-off, (P) 356

Production—*cont.*
well-cleaning, 43
diameter determination, 971
head pressure reduction, 607
spacing, 745, 749, 751, 963, 967, 972, 1213
treatment, (P) 189, (P) 610 (P) 767
Wertz Field, pressure maintenance, 600
worker's wage analysis, 812
Production Equipment:
backside pumping installations, 760
bailer, sand, (P) 356, (P) 498
bore-cleaner, (P) 610
bottom-hole chokes, 177
regulator, (P) 1426
cathead cooler, (P) 356
circulation valve, (P) 189
completion fluid, (P) 876
controlling device, (P) 356
cord, explosive, 179
corrosion of in high pressure wells, 1203, 1218
counterbalance, pneumatic, (P) 767
drivehead, (P) 1426
electric heater for wells, (P) 356
log headings, standardization, 347
float-valve, (P) 189
flow device, (P) 1426
meter, (P) 498, (P) 1426
starting apparatus, (P) 767
intermittors, (P) 189, (P) 767, (P) 1426
jack, (P) 876
liner-ranger, (P) 189
shut-off equipment, 1221
leakage testing of, (P) 498
oil treater, 756
packing valve, (P) 610, (P) 767, (P) 1426
paraffin heating device, (P) 498
perforation cleaner, (P) 876
perforator, (P) 876, (P) 1426
plug-backs, plastic, 184
prime movers, selection of, 350
pumping equipment, prime movers, 187
rod-lines, 755
selection, 355
speed reducers, 185
surface, 491
pump-plungers, size selection, 56
pump-pressure equalizer, (P) 876
rod shield, (P) 610
pumps, (P) 189, (P) 498, (P) 610, (P) 767, (P) 876, (P) 1426
separators for, (P) 1426
sucker-rod, 176, 183
rod-line equipment, installation, 758
scraper, (P) 876
screen cleaner, (P) 498
screens, (P) 498, (P) 767, (P) 1426
deep well, (P) 189, (P) 876
secondary recovery apparatus, (P) 1426
servicing mast, (P) 498
sucker-rod stripper, (P) 189
treating apparatus, (P) 189
Production—*cont.*
trip device, (P) 189
tubing, wall-thickness determination, 1219
valves, (P) 356, (P) 767
well head, (P) 610
packer, (P) 189, (P) 356, (P) 610, (P) 876
tester, (P) 610, (P)1426
treatment equipment, (P) 1426
Propane:
fluorinated derivatives, 793
heat capacity, 383
of solution, 269
*cyclo*Propane Systems, conjugation in, 1473
*iso*Propanol, peroxides in, 270
Prospecting, soil analysis for, 1179
Pyrethrin Concentrates, products formed in storage, 152
Pyrethrum Insecticides:
activated, 646, 647, 915, 1027
aerosol, 645, 1261
biological evaluation, 803, 804
history, chemistry and applications, 1506
testing, 1510
toxicity, in oil and aqueous media, 805
Pyridene, synthesis, 392

Quarternary Liquid Systems, tie lines in, 890
Quenching Oils, mineral, 141

Rates of Reaction, measurement, 535
Refineries:
Bayway, crude pipe-still at, 884
hazardous areas in, 1335
Houston, gas cycling plant, 887
Quaker State Oil Refining Corp., lubricating oil plant, 997
small, problems of, 1334
Sun Oil at Marcus Hook, 769, 776, 777, 778, 779
United States, Canada and Mexico, 88, 888
Refinery Engineering, 1241, 1243, 1245, 1247, 1338, 1339, 1444, 1445, 1448, 1449, 1451, 1452, 1453, 1495
Refinery Gas, surplus, reforming, 363
Refinery Plant:
automatic controllers, 100
catalyst screener, 1246
caustic embrittlement in boilers, 1437
cleaning problems, 992
codimer unit, 619
compressors, 623, 991
condenser design, 1441
continuous reactor design, 201, 293, 204
corrosion in, 1122, 1240
resisting alloys, 206, 1240
effect of sulphur on, 772
electronic controls, 94
elevated towers, foundations for, 989
fluid catalytic cracking, 774, 775, 776
fractionating plant, 505

Refinery Plant—*cont.*
furnace efficiency, 501
gate valves, 97
heat exchanger surface, 83
high vacuum measurement, 211
integrated cycling units, 373
materials for anhydrous hydrofluoric acid, 209
motor starters, 1325
100 octane gasoline, 375, 378, 773, 1123
packing materials, 771
pipe-stills, 205
pressure vessels, linings for stainless steel, 210
welded, test pressure and safe dimensions, 1323
pumps, centrifugal, 624
high vacuum, 207
positive displacement and centrifugal, 1322
rotary, refinery application, 82, 95
stack and tower foundation design, 92
tube cleaners
tubes and tube headers, rebuilding, 377
vapour recovery systems, 1242
welding cable, storage reels for, 990
welded vessels, test pressures, 502
Wiggins Piston-Balloon tank, 1242
Refining :
absorption factor, 379
acidic organic compounds removal, (P) 889
acid-treated oils, corrosion-reduction, (P) 381
bauxite uses, 885, 1326, 1327
colour removal, (P) 381, (P) 889
contact filtration, 84
cooling water analysis, 1330
dessicants, activated bauxite, 200
eddy diffusion, 1440
emulsion treatment, (P) 381
exchanger size selection, 883
filtration data analysis, 1442
fluorine compound removal, (P) 381
Girbotol process, extension to liquid hydrocarbons, 1121
gum inhibition, (P) 381
gum, resin, etc., removal, (P) 1340
heat transfer, 618, 1231, 1232, 1233, 1234, 1235, 1237, 1241, 1243, 1245, 1247.
coefficients for condensers, 85
film coefficients, 1338, 1339, 1443, 1444, 1447, 1495
high-sulphur gasolines, 372
Houdry process, use of gas turbines in, 1321
hydrogen sulphide detection, 1439
liquid-phase cracked gasolines, treatment with zinc chloride, 90
Mercapsol process, 995
mercaptan removal, (P) 508, (P) 889, 993, 995, (P) 998, 1328, (P) 1454
pressure-drop data for flow through beds of granular adsorbents, 1336
in heat exchangers, 1449, 1451, 1452
Refining—*cont.*
processes, (P) 381, 503, (P) 889, (P) 998, (P) 1248
specific heat charts, 1453
stage separation of mixtures, 1337
sulphur removal, 89, 374, (P) 381, 886, (P) 1248, (P) 1259, 1319, 1320, 1328, (P) 1340, (P) 1454
catalytic, 212
superfractionating, 98
sweetening, (P) 381, (P) 889, (P) 1454
Tannin solutizer process, 886, 1244
terminology, 506
thiophenol elimination, 988
toluene separation, (P) 381
Unisol separation, 994
waste gas combustion, 73
water treating, 86, 87, 99, 1438
wax separation, (P) 889, (P) 1248
zinc chloride treatment of cracked oil, 1318
Reforming, thermal, 1430
Refractometer, Abbe, 541
Residues, aromatic petroleum, vulcanization of, 910
Resins, synthetic, dermatitis from, 1023
development trend, 1505
1943 production, 1513
Ring and Ball Test, rapid, 275
Rock Drills, lubricants for, 123
Rocky Mountains :
discoveries, 686, 1140
Elk Basin, 166
mud-conditioning, 488
rotary drilling hazards reduction, 340
Rubber :
conductivity, 907
linking with phenol-formaldehyde resins, 437
Rumania, drilling, 476

Sampling, portable gas aspirator, 1488
Santo Domingo, drilling, 1151
Saudi Arabia, development, 928
Sewage Sludge :
production and use of gases from, 74
recovery of grease from, 1500
Shaker, vibratory, 271
Shale Oil, 1032
Sludge :
acid, use for production of HCl, 151
flow-friction data, 620
Smokemeter, improved Penn State, 114
Soaps, anhydrous sodium, physical states, 429, 430
Solubility Curves, line co-ordinate representation, 892
Solvents :
chloro-hydrocarbon, physical properties, 450
mixed, osmotic pressures, 1481
petroleum, 301, 806
South America, oil areas, 856
Spectrometric Analysis, 1493, 1494
Spekker Photo-Electric Absorptiometer, phenol estimation by, 274

Spindle Oils, Venezuelan, carcinogenic material in, 456
Steam-Carbon Reaction, mechanism, 522
Storage Tanks:
concrete, 984
evaporation from, 60
prevention, (P) 189, 981
floating roof, roof-seal, (P) 189
side wall for, (P) 189
supporting structure, (P) 189
horizontal, calculation of fractional contents, 357
ring girders for, 1331
vapour loss calculation, 1332
recovery, 190
space elimination, 1447
volatile liquid, 1450
Styrene:
high temperature, 1363
manufacture, 142, 911
polymerization, 403, 1343, 1344
vapour pressure, 238
Styrene Derivative, optically active, synthesis, 1482
Sulphonates, preparation and description, 412, 1521
Sulphur, estimation in light petroleum fractions, 1349
Sulphur Compounds:
hydrogenation, 261
hydrogenolysis, 259
organic, removal, 198
Surface-Active Agents:
industrial applications, 1517
Switchgear Oils, 294
Synthetic Oils, German processes, 452
Synthetic Rubber:
acrylonitrile manufacture for Buna-S, 1263
Buna-S plant, 1262
styrene for, 145
butyl, production, 298
Californian plant, 1351
Canadian programme, 463
conductivity, 907
development, 129
effect of aviation gasoline on low temperature flexibility, 1511
elasticity tester, 461
flex life and crystallization, 465
manufacture at Institute, 146
manufacturing capacity, 144
production, 133
of hydrocarbons for, 110
refinery conversion projects, 128
utilization in oil industry, 464
utilities involved in manufacture, 134
Synthetics, patent literature, 451

Tankers, cleaning and gas freeing, 1222
Tar, viscosity control, 278
Tar Emulsions, hydrogen-ion concentration, 539
Tar Products, use as building materials, 1033
"Teepol," 1509
Tennessee:
Central, structure of, 1386
oil and gas possibilities, 1285
Ternary Distillation Problems, graphical solution, 1462
Test Engines:
correlation of results from, 638
Gulf Oil Corporation design, 640
1 : 2 : 9 : 10-Tetramethylanthracene synthesis, 787
2-Substituted-5 : 6 : 7 : 8-tetrahydronaphthalene derivatives, catalytic dehydrogenation, 423
Taxes:
Alta Mesa field, 483
Emblar Field geology, 1037
Hildreth Field, 317
Galveston Bay discovery, 727
Lake Creek triple completion, 54
production, 708
triple-zone completion, 181
Wasson Field geology, 1035
Texas, East:
developments, 1134, 1158
New Hope Field, 682
Water injection, 182
Texas, North:
developments, 1133
Texas, South:
developments, 1131
Texas, North Central:
discoveries, 690
Texas, South-West:
extensions, 681
Texas, West Central:
discoveries, 691, 1133
Texas, West:
deep drilling, 41, 959
developments, 1132
Ellenburger Fields, 935
Permian Basin, Panhandle, 679
Thermoplastic Polymers, Softening of, 1001
Thixotropy, effect on plasticity measurements, 1124
Toluene:
heat capacity of, 233
metalation, 515
preparation, 743, 1020
vapour-phase nitration, 795
Transformer Oils, 294
1 : 1 : 1 : 1 : -Trifluoroethane, thermal data, entropy and vapour pressure, 1471
Trimethylethylene and *cyclo*Hexane Mixtures, co-ordination of silver ions with, 390
2 : 2 : 4-Trimethylpentane, pressure–volume–temperature relations, 510
Triptane, commercial production, 148
Triptycene (9, 10-*ortho*-benzeno-anthracene), properties, 242
Turkey, oil discovery, 1165
Tygon, properties and applications, 1270

United States, see also separate States :
Appalachian area developments, 1139
completions, 10, 34, 35, 325, 327, 334, 485, 486, 567, 572, 589, 701, 703, 705, 713, 725, 729, 815, 819, 822, 823, 824, 828, 834, 837, 850, 855, 860, 925, 926, 934, 945, 947, 949, 1048, 1049, 1053, 1055, 1058, 1061, 1062, 1064, 1065, 1067, 1068, 1069, 1072, 1077, 1079, 1082, 1084, 1085, 1088, 1154, 1156, 1157, 1161, 1167, 1168, 1172, 1173, 1178, 1273, 1276, 1278, 1279, 1281, 1284, 1286, 1287, 1289, 1290, 1292, 1393, 1401, 1402, 1403, 1407, 1409, 1410, 1413, 1418, 1419, 1420, 1421
crude oil output, 12, 22, 28, 164, 573, 577
discoveries, 5, 9, 11, 20, 25, 167, 311, 314, 315, 318, 325, 327, 329, 334, 486, 589, 676, 705, 727, 739, 819, 822, 831, 838, 850, 855, 860, 925, 926, 947, 949, 1049, 1055, 1059, 1064, 1068, 1077, 1082, 1088, 1157, 1161, 1168, 1173, 1178, 1279, 1284, 1287, 1292, 1392, 1396, 1402, 1409, 1413, 1419, 1420
discovery decline, 4, 7
drilling, 310, 316, 326, 714, 715, 815, 820, 1060, 1275
deep, 1394, 1395
Eastern Gulf Region, exploration, 1073
Eastern Interior Basin developments, 1137
exploration, 950, 1090, 1391, 1400
future oil supply, 307
Gulf and Mid-Continent reserves, 1081
North Mid-Continent developments, 1136
natural gas production, 716
supply and reserves, 1078
new geological survey, 320
oil resources, 814
shale and shale oil, 561
shortage, 21
zones : Eocene, 9
Oligocene, 24
Miocene-Pliocene, 313
Permian Basin Pays, 841
post-war oil consumption, 921, 1528
production, 33, 186, 331, 565, 677, 710, 711, 712, 717, 722, 1170, 1277, 1378, 1404, 1415
refineries, 88
reserves, 675, 709, 836, 839, 930, 1153
South-Eastern, developments, 1381
probable major oil province, 1066
wildcats, 20, 25, 36, 167, 310, 311, 315, 318, 319, 324, 325, 327, 334, 473, 485, 486, 572, 585, 587, 589, 680, 699, 703, 705, 729, 819, 821, 822, 830, 850, 855, 860, 923, 925, 926, 936, 947, 949, 1049, 1055, 1059, 1064, 1068, 1077, 1082, 1088, 1129, 1157, 1161, 1168, 1173, 1178, 1279, 1284, 1287, 1292, 1396, 1402, 1409, 1413, 1419, 1420
U.S.S.R. :
Arctic, refinery in, 933
crude oils, 361, 1311, 1313
developments, 1159
production and refining expansion, 1171
Sakhalin Island, 1405
"Second Buka," 1169
Tatar Republic discovery, 1155
Volga Fields, 846

Vapour Pressure, slide rule for variations in, 266
Velometry, 802
Venezuela :
Creole company's production, 1408, 1416
drilling, 1046
Eastern, cracking of crude oil from, 1223
Jusepin discovery, 1074, 1080
San Joaquin area, multiple pays problem, 1087
Socony-Vacuum concession, 1075
Western, cracking of crude oils from, 1224
Vinyl Chloride and Vinyl Acetate, structure of copolymers, 231
Vinyl Compounds, heat of polymerization, 520
Viscosimetry, 108, 894
Viscosity Function, 516
Vistanex, 127

Waxes :
definitions, 444
high-melting-point, recovery, 132
refining, 130
paraffin, breakdown by bacteria, 139
chlorination, 913
properties and utilization, 648
sugar cane, 916
West Virginia, exploration, 688
World :
deepest well in, 959, 962, 1108, 1109, 1184
oil production, American control of, 27
supply, availability, 312
reserves, 843
production, 31, 159, 186, 612, 706, 707, 840, 1071
surplus crude disposal problem, 1160
Wrappings, transparent, permeability of, 273
Wurtz Reaction, 221
Wyoming :
Big Horn Basin, black oil horizons, 323
exploration and development, 1083, 1283
Gebo pool discovery, 1414
geological aspects, 1283

Xylene, metalation, 515
o- and *p*-Xylene, alkylation, 1475

BOOKS REVIEWED AND RECEIVED, 1944.

Numbers refer to pages.

Academy of Sciences of the U.S.S.R., *Charts for the Solution of Problems of Non-Axial Crank-Connecting Rod Mechanisms*, 468A

American Society for Testing Materials, *Standards on Petroleum Products and Lubricants (1943 edn.)*, 54A

Ball, J. S., *Aniline Points of Hydrocarbons*, 268A

Blade, O. C. *See* Kraemer, A. J.

Bowles, O., *Industrial Insulation with Mineral Products*, 388A

British Standards Institution, *Aluminium Alloy Sections: B.S. No. 1161: 1944*, 268A

B.A. Screws, Nuts and Washers: B.S. 57: 1944, 468A

Bitumen and Fluxed Pitch Roofing Felts: B.S. No. 989: 1944, 468A

Conversion Factors and Tables: B.S. No. 350: 1944, 468A

Engineering Drawing Office Practice: B.S. No. 308: 1943, 182A

High Duty Studs and Tapped Holes in Light Alloys: B.S. 1171: 1944, 388A

Mastic Asphalt for Roofing. Natural Rock with High Bitumen Content (6–10 per cent.); B.S. No. 1162: 1944, 312A

Non-Reinforced Diamond Dies for Wire Drawing: B.S. No. 1168: 1944, 354A

Pitch Mastic Flooring: B.S. No. 1093: 1944, 436A

Pitch Mastic Flooring Incorporating Lake Asphalt: B.S. No. 1771: 1944, 436A

Protective Painting of Iron and Steel: B.S. No. 1160: 1944, 268A

Rolled Asphalt: B.S. No. 1152: 1944, 182A

Solid Drawn Steel Air Receivers: B.S. No. 430: 1944, 214A

Tapping Drill Sizes: B.S. No. 1157: 1944, 214A

Test Sieves: B.S. No. 410: 1943, 54A

Burk, R. E., and Grummitt, *Chemical Background for Engine Research*, 213A

Carpenter, C. B., and Schroeder, H. J., *Petroleum Engineering Study of Magnolia Oil Field*, 268A

Coke Oven Managers' Association, *Year Book, 1944*, 388A

Cook, A. B., *Derivation and Application of Material-Balance Equations–Magnolia Oil Field*, 268A

Cruellas, J. *See* Fester, G. A.

Fester, G. A., and Cruellas, J., *Caracteristics Diferenciales entre las Asfaltitas y los Carbones Sedimentarios*, 268A

Las Asfaltitas de la Provincia de Mendoza, 268A

Fieldner, A. C., *Recent Developments in Fuel Supply and Demand*, 388A

Grummitt, O. *See* Burk, R. E.

Guthrie, R. K. *See* Hill, H. B.

Hey, D. H., *Some Recent Advances in Chemistry in Relation to Medicine*, 388A

Hill, H. B., and Guthrie, R. K., *Analysis of Oil Production in near-depleted Mexia-Powell Fault-Line Fields of Texas (U.S. Bureau of Mines Report of Investigations No. 3712)*, 214A

Holliman, W. C., *Synthetic Rubber: its Production from Petroleum, Coal and Other Materials (U.S. Bureau of Mines Information Circular No. 7242)*, 54A

Institution of Automobile Engineers, *Proceedings, Vol. 37*, 268A

Institution of Mechanical Engineers, *Proceedings, Vol. 149*, 54A

Proceedings, Vol. 150, 312A

Iron and Steel Institute, *Journal, Vol. 47*, 182A

Journal, Vol. 148, No. 2, 354A

Junior Institution of Engineers, *Transactions, Vol. 53*, 102A

Kraemer, A. J., and Blade, O. C., *National Motor Gasoline Survey, Summer 1943*, 388A

Künzler, H. *See* Stäger, H.

Logan, D. M. *See* Taliaferro, D. B.

Ministry of Fuel and Power, *Economical Lubrication of Steam Turbines and Reciprocating Steam Engines*, 468A

Ministry of Fuel and Power, *Plan for the Economical Distribution, Application and Reclamation of Cutting Oils and Coolants*, 468A

National Oil Policy Committee of the Petroleum Industry War Council, *A National Oil Policy for the United States*, 312A

Schroeder, H. J. *See* Carpenter, C. B.

Shea, G. B., *Some Tools and Methods used in Cleaning Oil Wells in California (U.S. Bureau of Mines Report of Investigations, No. 3706)*, 54A

Stäger, H., and Künzler, H., *Emulsionen für die Metallbearbeitung (Part I)*, 354A

Taliaferro, D. B., and Logan, D. M., *History of Water Flooding of Oil Sands in Oklahoma*, 388A

U.S. Bureau of Mines, *Survey of Subsurface Brine-Disposal Systems in Western Kansas Oil Fields*, 214A

U.S. Temporary National Economic Committee, *Investigation of Concentration of Economic Power*, 102A